

TSD File Inventory Index

Date: March 12, 2009

Initial: CMK/mao

Facility Name: <u>Mullin Brass Company</u>			
Facility Identification Number: <u>AKID 005 357 504</u>			
A.1 General Correspondence		B.2 Permit Docket (B.1.2)	
A.2 Part A / Interim Status <u>A.2</u>	<u>1</u>	.1 Correspondence	
.1 Correspondence	<u>✓</u>	.2 All Other Permitting Documents (Not Part of the ARA)	
.2 Notification and Acknowledgment	<u>✓</u>	C.1 Compliance - (Inspection Reports) <u>C.1</u>	<u>1</u>
.3 Part A Application and Amendments	<u>✓</u>	C.2 Compliance/Enforcement <u>C.2 (3)</u>	<u>3</u>
.4 Financial Insurance (Sudden, Non Sudden)		.1 Land Disposal Restriction Notifications	
.5 Change Under Interim Status Requests		.2 Import/Export Notifications	
.6 Annual and Biennial Reports		C.3 FOIA Exemptions - Non-Releasable Documents <u>C.3 (2)</u>	<u>2</u>
A.3 Groundwater Monitoring		D.1 Corrective Action/Facility Assessment	
.1 Correspondence		.1 RFA Correspondence	
.2 Reports		.2 Background Reports, Supporting Docs and Studies	
A.4 Closure/Post Closure		.3 State Prelim. Investigation Memos	
.1 Correspondence		.4 RFA Reports	
.2 Closure/Post Closure Plans, Certificates, etc <u>A.4.5</u>	<u>1</u>	D.2 Corrective Action/Facility Investigation	
A.5 Ambient Air Monitoring		.1 RFI Correspondence	
.1 Correspondence		.2 RFI Workplan	
.2 Reports		.3 RFI Program Reports and Oversight	
B.1 Administrative Record		.4 RFI Draft /Final Report	
		.5 RFI QAPP	

Total - 9

.6 RFI QAPP Correspondence		.8 Progress Reports	
.7 Lab Data, Soil-Sampling/Groundwater		D.5 Corrective Action/Enforcement	
.8 RFI Progress Reports		.1 Administrative Record 3008(h) Order	
.9 Interim Measures Correspondence		.2 Other Non-AR Documents	
.10 Interim Measures Workplan and Reports		D.6 Environmental Indicator Determinations	
D.3 Corrective Action/Remediation Study		.1 Forms/Checklists	
.1 CMS Correspondence		E. Boilers and Industrial Furnaces (BIF)	
.2 Interim Measures		.1 Correspondence	
.3 CMS Workplan		.2 Reports	
.4 CMS Draft/Final Report		F Imagery/Special Studies (Videos, photos, disks, maps, blueprints, drawings, and other special materials.)	
.5 Stabilization		G.1 Risk Assessment	
.6 CMS Progress Reports		.1 Human/Ecological Assessment	
.7 Lab Data, Soil-Sampling/Groundwater		.2 Compliance and Enforcement	
D.4 Corrective Action Remediation Implementation		.3 Enforcement Confidential	
.1 CMI Correspondence		.4 Ecological - Administrative Record	
.2 CMI Workplan		.5 Permitting	
.3 CMI Program Reports and Oversight		.6 Corrective Action Remediation Study	
.4 CMI Draft/Final Reports		.7 Corrective Action/Remediation Implementation	
.5 CMI QAPP		.8 Endangered Species Act	
.6 CMI QAPP Correspondence		.9 Environmental Justice	
7			

Note: Transmittal Letter to Be Included with Reports.

Comments: _____

LAND AND CHEMICALS DIVISION

Type of Document: Mueller Brass CAFD termination

Name of Document: _____

NAMES

DATE

AUTHOR: _____

SECTION APA: _____

SECTION CHIEF: J. Morris Jr 3/3/15

BRANCH APA: MC 3/4

BRANCH CHIEF: Jay Victorine 3/6/15

DIVISION APA: _____

DIVISION DIRECTOR: _____

OTHERS: _____

DRA: _____

RA: _____

RETURN TO: _____

PHONE: _____

COMMENTS:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 09 2015

REPLY TO THE ATTENTION OF:

Mr. Barry Munce
Quality & Technical Services Manager
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060

Re: Consent Agreement and Final Order
Mueller Brass, MID005357504
Docket No.: RCRA-05-2008-0016

Dear Mr. Munce:

The U.S. Environmental Protection Agency has determined that Mueller Brass Company (Mueller) has fully complied with all terms and conditions of the Consent Agreement and Final Order (CAFO) filed in the above-captioned matter on September 30, 2008. In accordance with Paragraph 76 of the CAFO, U.S. EPA therefore notifies Mueller that this CAFO is terminated. This determination is based on information provided by Mueller to U.S. EPA. Accordingly, this termination will be considered null and void should such information prove to be inaccurate.

If you have any questions or concerns regarding this matter, please contact Julie Morris, of my staff, at (312) 886-0863.

Sincerely,

A handwritten signature in blue ink, reading "Gary J. Victorine", is written over the typed name and title.

Gary J. Victorine, Chief
RCRA Branch

cc: John Craig, MDEQ, Craigj@michigan.gov

October 29, 2013

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Annual SEP Summary Report – 4th Year

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company, U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file an annual SEP summary report within sixty days after the 2nd, 3rd, 4th, and 5th anniversaries of beginning operation of the reverse osmosis system. Construction was considered complete on 9/28/2009. This being the 4th annual report submitted summarizes the operation period between 9/28/2012 and 9/28/2013.

Pursuant to paragraph 85 item D the following is a listing of the requested information for the reporting period:

- i. A detailed description of the SEP as implemented
- ii. An audit of SEP expenditures, including but not limited to, itemized costs for the SEP, documented by copies of purchase orders and receipts or canceled checks
- iii. Certification that the SEP has been implemented pursuant to the provisions of this CAFO
- iv. A description of the environmental and public health benefits resulting from implementation of the SEP and a best estimate quantification of the benefits and pollution reductions obtained.

Enclosed you will find the response to each piece of information requested.

Sincerely,



Kevin Pedler
EHS Manager
Mueller Brass Company
810-434-2713



A DETAILED DESCRIPTION OF THE SUPPLEMENTAL ENVIRONMENTAL PROJECT AS IMPLEMENTED

A reverse osmosis system (ROS) was added to the existing metal detoxification wastewater treatment system at Mueller Brass Company's Port Huron, MI facility as a result of a Supplemental Environmental Project negotiated in conjunction with a Consent Agreement and final Order (CAFO) from Region V of the United States Environmental Protection Agency Docket No. RCRA-05-2008-0016.


The existing wastewater treatment system receives rinse waters from the facility which are cycled through the following processes: homogenization, neutralization/ precipitation, flocculation, clarification and sand filtration.

The ROS was added to reduce the amount of metals discharged from the wastewater treatment to the environment. As operating today, the ROS consists of the following sequence: Ph adjustment, homogenization, media filtration, water softening, cartridge filtration and reverse osmosis.

The system is engineered to use either discharge water from the wastewater treatment system or capture storm water runoff. Storm water runoff is fed directly to the ROS or is sent to plant processes for cooling and then becomes incorporated into the flow that is processed through the metal detoxification system.

The primary feed for the ROS is the discharge water from the wastewater treatment system or storm water. The system is designed to remove metal that remains in solution (was not precipitated). The treated water from the ROS is either discharged to the City of Port Huron Reclamation Treatment Plant or recycled to Mueller Brass plant processes for reuse. The reject flow from the ROS is sent to the front of the metal detoxification system for retreatment.

This statement and the above description are to serve as certification that the SEP has been implemented pursuant to the provisions of the Consent Agreement and Final Order Docket No. RCRA-05-2008-0016.


Signature

11/4/13
Date

A DESCRIPTION OF THE ENVIRONMENTAL AND PUBLIC HEALTH BENEFITS

Implementation of the supplemental environmental project has enabled Mueller Brass Company to reduce its environmental impact in three manners. Installation of the reverse osmosis system has allowed for water to be reused at the facility that would otherwise have been sent to the POTW for treatment. This prevents the metals included in that water from being sent to the POTW. The reuse of the RO treated water enables Mueller Brass Co to purchase less water from the city. Both of these criteria reduce the burden placed upon the POTW to treat and supply Mueller Brass Co with those quantities of water.

For the time frame of September 28, 2012 to September 28, 2013 the best estimates as calculated by Mueller Brass Co calculates the RO system to have processed 28,613,447 gallons of water. This equates to 230 pounds of metal that would otherwise have been sent to the POTW being captured in the Mueller system. This calculation is based upon recent waste water discharge analysis, storm water analysis and RO discharge analysis.

Also beneficial to the environment is the recycling of the filter cake from the waste water treatment system. The filter cake is a composition of the flocculent used in the waste water treatment process and the metals that precipitate from the water. This cake that was previously sent to landfill is now being recycled for its zinc content.

From September 28, 2012 to September 28, 2013 Mueller Brass Co. shipped 86,404 pounds of filter cake to a zinc reclamation facility. Based upon recent analytical data this equates to 42,779 pounds of metals being recycled rather than landfilled.

AN AUDIT OF SEP EXPENDITURES INCLUDING AN
ITEMIZED LIST AND INDIVIDUAL PURCHASE ORDERS

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

X 

Steffen Sigloch

V.P. of Corporate Engineering and Manufacturing

MID 005 357 504

Inventory Purchase Order R48709

Status Completed



Amendment

PO Date 10/3/2012

Contract #

Print Date 11/4/2013

Supplier	Ship To	Bill To
TOTAL FILTRATION SERVICES 1271 RANKIN TROY, MI 48083	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA F.O.B.	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA Terms
Phone Number (248) 377-4004	Shipper	
Fax Number (248) 475-8269		

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To		10/3/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-162154 REVERSE OSMOSIS MEMBRANE ELEMENT 8" X 40" - (HYDRANAUTICS) - 1/2 ORDER IN OCTOBER STRUBLE Supplier #: ESPA2-LD Task #: 173705*5 Required: 10/10/12 Requested By: DAVE STRUBLE (DSTRUBLE)	18.00	EA	\$560.26	\$10,084.68	\$0.00	\$10,084.68	63305	5500
2	NS-185869 REVERSE OSMOSIS MEMBRANE ELEMENT 8" X 40" - (HYDRANAUTICS) 1/2 ORDER IN NOVEMBER STRUBLE Supplier #: ESPA2-LD Task #: 173705*5 Required: 11/10/12 Requested By: DAVE STRUBLE (DSTRUBLE)	18.00	EA	\$560.26	\$10,084.68	\$0.00	\$10,084.68	63305	5500

Order Net	\$20,169.36
Order Tax	\$0.00
Order Total	\$20,169.36

Approved By DIANE LANGOLF (DLANGOLF)

10/3/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

**Supplier**

MORTIMER & SON LUMBER CO., INC.
 2307 LAPEER AVE
 PORT HURON, MI 48060

Phone Number (810) 987-3020

Fax Number

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To LAURIN		10/30/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-186273 SOFTENER PELLETS 50# Task #: 188696*6 Required: 11/05/12 Requested By: DOUG WESTBROOK (DWESTBRO)	49.00	EA	\$6.45	\$316.05	\$0.00	\$316.05	63305	5500
2	NS-186274 DELIVERY CHARGE Task #: 188696*6 Required: 11/05/12 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$15.00	\$15.00	\$0.00	\$15.00	63305	5500

Order Net	\$331.05
Order Tax	\$0.00
Order Total	\$331.05

Approved By DIANE LANGOLF (DLANGOLF)

10/30/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Status Completed
 Amendment 1
 PO Date 12/5/2012
 Contract #
 Print Date 11/4/2013

**Supplier**

D G R CONTRACTING
 390 N. DECKER RD.
 MARLETTE, MI 48453

Phone Number (989) 635-7354
 Fax Number (989) 635-6664

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2%/10, n30

Original Order		Yes	Confirming Order		No	Tax Exempt		No	Non-Exempt		No	MSDS Required		No
Confirm To		DON				12/5/2012								
Line	Part/Description				Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr		
1	NS-187426 COST TO COVER MACHING UHMW FOR 2000# FOR BUNDLER ALSO FOR 1000 LB BUNDLES KINNEY Task #: 188697*1 Required: 12/04/12 Requested By: BOB KINNEY (BKINNEY)				1.00	EA	\$1,200.00	\$1,200.00	\$0.00	\$1,200.00	63410	5204		
2	NS-187427 CLEAN OUT OF RO FEED TANK WESTBROOK Task #: 173748*1 Required: 12/10/12 Requested By: DOUG WESTBROOK (DWESTBRO)				1.00	EA	\$500.00	\$500.00	\$0.00	\$500.00	66808	5500		
								Order Net	\$1,700.00					
								Order Tax	\$0.00					
								Order Total	\$1,700.00					
Approved By DIANE LANGOLF (DLANGOLF)														
12/5/2012														

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Supplier	Ship To	Bill To
MOTION INDUSTRIES P O BOX 1057 6576 DIPLOMAT DRIVE STERLING HEIGHTS, MI 48311	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA F.O.B. DEST, FRT ALLOWED	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA Terms 2% 15, NET 45
Phone Number (248) 583-8600	Shipper	
Fax Number (248) 583-8635		

Original Order Yes		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Confirm To QUOTE 024991				1/7/2013					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 01/08/13 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$17.58	\$17.58	\$0.00	\$17.58	63305	5100
2	950712 FILTER - ELEMENT, P/N V6011B2C05, FOR AD BUNDLER HYDRAULIC UNIT Supplier #: V6011B2C05 Required: 01/08/13 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$53.21	\$53.21	\$0.00	\$53.21	63305	5204
3	920336 LUBRICANT - OPEN CHAIN, 12 PER CASE, P/N S00202 Supplier #: 00202 Required: 01/13/13 Requested By: KANDI COLBATH (KCOLBATH)	24.00	EA	\$3.99	\$95.76	\$0.00	\$95.76	63305	5100
4	500607 FILTER - ELEMENT HYCON P/N 0660D005BN4HC REXROTH P/N 6H10821 Supplier #: 0660D005BN4HC Required: 01/11/13 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$168.42	\$168.42	\$0.00	\$168.42	63305	4113
5	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 01/15/13 Requested By: KANDI COLBATH (KCOLBATH)	120.00	EA	\$5.10	\$612.00	\$0.00	\$612.00	63305	5500
						Order Net	\$946.97		
						Order Tax	\$0.00		
						Order Total	\$946.97		

Approved By DIANE LANGOLF (DLANGOLF)

1/7/2013

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
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**Supplier**

CHEM-AQUA
 1331 WEST LAKE DRIVE
 NOVI, MI 48377

Phone Number

Fax Number (248) 960-1409

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order Yes Confirming Order No Tax Exempt No Non-Exempt No MSDS Required No
 Confirm To RON JOHNSON 4/19/2013

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-190580 55 GALLON DRUM OF SODIUM BISULFITE FOR USE ON THE RO SYSTEM (PART NUMBER 10187992) WESTBROOK Task #: 13-01771*1 Required: 04/29/13 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$399.75	\$399.75	\$0.00	\$399.75	63305	5500

Order Net \$399.75
 Order Tax \$0.00
 Order Total \$399.75

Approved By DIANE LANGOLF (DLANGOLF)

4/19/2013

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
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Supplier	Ship To	Bill To
TOTAL FILTRATION SERVICES 1271 RANKIN TROY, MI 48083	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA F.O.B.	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA Terms
Phone Number (248) 377-4004	Shipper	
Fax Number (248) 475-8269		

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To BILL HALL		6/4/2013		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-162154 REVERSE OSMOSIS MEMBRANE ELEMENT 8" X 40" - (HYDRANAUTICS) - 1/2 ORDER IN JUNE STRUBLE Supplier #: ESPA1 Task #: 173705*5 Required: 06/10/13 Requested By: DAVE STRUBLE (DSTRUBLE)	18.00	EA	\$543.23	\$9,778.14	\$0.00	\$9,778.14	63305	5500
2	NS-185869 REVERSE OSMOSIS MEMBRANE ELEMENT 8" X 40" - (HYDRANAUTICS) 1/2 ORDER IN JULY STRUBLE Supplier #: ESPA1 Task #: 173705*5 Required: 07/10/13 Requested By: DAVE STRUBLE (DSTRUBLE)	18.00	EA	\$543.23	\$9,778.14	\$0.00	\$9,778.14	63305	5500

Order Net \$19,556.28
 Order Tax \$0.00
 Order Total \$19,556.28

Approved By DIANE LANGOLF (DLANGOLF)

6/4/2013

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 7/17/2013

Contract #

Print Date 11/4/2013

Supplier	Ship To	Bill To
CHEM-AQUA 1331 WEST LAKE DRIVE NOVI, MI 48377	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA F.O.B.	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA Terms
Phone Number (800) 631-0990	Shipper	
Fax Number (248) 960-1409		

Original Order	Yes	Confirming Order	No	Tax Exempt	No	Non-Exempt	No	MSDS Required	No
Confirm To	RON JOHNSON			7/17/2013					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-192706 55 GALLON DRUM OF SODIUM BISULFITE FOR USE ON THE RO SYSTEM (PART NUMBER 10187992) WESTBROOK Task #: 13-01771*2 Required: 08/05/13 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$399.75	\$399.75	\$0.00	\$399.75	63305	5500

Order Net	\$399.75
Order Tax	\$0.00
Order Total	\$399.75

Approved By DIANE LANGOLF (DLANGOLF)

7/17/2013

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Supplier	Ship To	Bill To
MOTION INDUSTRIES P O BOX 1057 6576 DIPLOMAT DRIVE STERLING HEIGHTS, MI 48311	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA
Phone Number (248) 583-8600	F.O.B. DEST, FRT ALLOWED	Terms 1% 10&25TH NET 60
Fax Number (248) 583-8635	Shipper	

Original Order	Yes	Confirming Order	No	Tax Exempt	No	Non-Exempt	No	MSDS Required	No
Confirm To	QUOTE 068866			8/16/2013					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	832408 FILTER - AIR, THROWAWAY, 10" X 10" X 1" FIBERGLASS Supplier #: 10 X10 X1 Required: 08/24/13 Requested By: KANDI COLBATH (KCOLBATH)	12.00	EA	\$1.58	\$18.96	\$0.00	\$18.96	63305	5100
2	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 08/27/13 Requested By: KANDI COLBATH (KCOLBATH)	120.00	EA	\$5.10	\$612.00	\$0.00	\$612.00	63305	5500
3	920487 "O" RING - 3/16 X 3 5/8 X 4, 2 PER PKG., P/N 568-342 Supplier #: 568-342 Required: 09/12/13 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$0.80	\$0.80	\$0.00	\$0.80	63305	5100

Order Net \$631.76
 Order Tax \$0.00
 Order Total \$631.76

Approved By DIANE LANGOLF (DLANGOLF)

8/16/2013

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Supplier		Ship To		Bill To					
MOTION INDUSTRIES P O BOX 1057 6576 DIPLOMAT DRIVE STERLING HEIGHTS, MI 48311		MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA		MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA					
Phone Number	(248) 583-8600	F.O.B.	DEST, FRT ALLOWED	Terms	1% 10&25TH NET 60				
Fax Number	(248) 583-8635	Shipper							
Original Order Yes		Confirming Order No		Tax Exempt No					
Confirm To QUOTE 073024				9/10/2013					
Non-Exempt No		MSDS Required No							
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	920447 "O" RING - 1/16 X 5/16 X 7/16, 20 PER PKG., P/N 568-011 Required: 09/22/13 Requested By: KANDI COLBATH (KCOLBATH)	25.00	EA	\$0.34	\$8.50	\$0.00	\$8.50	63305	5100
2	803672 BELT - "V", 3VX350 GATES Supplier #: 3VX350 Required: 09/14/13 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$5.86	\$5.86	\$0.00	\$5.86	63305	5100
3	924492 OIL - HYD. JACK LUBRIPLATE, LOCTITE Supplier #: 30523 Required: 09/15/13 Requested By: KANDI COLBATH (KCOLBATH)	1.00	GL	\$13.18	\$13.18	\$0.00	\$13.18	63305	5100
4	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 09/14/13 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$18.47	\$36.94	\$0.00	\$36.94	63305	5100
5	920011 FITTING - HOSE MENDER, 1/4", AEROQUIP P/N 4772-4B Supplier #: 4772-4B Required: 10/03/13 Requested By: KANDI COLBATH (KCOLBATH)	8.00	EA	\$4.56	\$36.48	\$0.00	\$36.48	63305	5203
6	659048 BLADE - HACK SAW, POWER, 21 X 1 3/4, 4 TOOTH, P/N 40126 Supplier #: 40126 Required: 09/23/13 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$27.64	\$55.28	\$0.00	\$55.28	63305	5100
7	832357 FILTER - AIR, THROWAWAY, 20 X 20 X 2 STD. CAP, P/N 80055.022020. (PLEATED) Supplier #: 80055.022020 Required: 09/22/13 Requested By: KANDI COLBATH (KCOLBATH)	24.00	EA	\$4.04	\$96.96	\$0.00	\$96.96	63305	4101
8	500603 FILTER - ELEMENT HYDAC P/N 0330R010BN4HC REXROTH P/N 6H20613 Supplier #: 0330R010BN4HC	2.00	EA	\$91.39	\$182.78	\$0.00	\$182.78	63305	4103

**Supplier**
 MOTION INDUSTRIES
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 Phone Number (248) 583-8600
 Fax Number (248) 583-8635
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 1% 10&25TH NET 60

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To QUOTE 073024		9/10/2013		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
	Required: 09/14/13								
	Requested By: KANDI COLBATH (KCOLBATH)								
9	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 09/21/13 Requested By: KANDI COLBATH (KCOLBATH)	120.00	EA	\$5.10	\$612.00	\$0.00	\$612.00	63305	5500

Order Net	\$1,047.98
Order Tax	\$0.00
Order Total	\$1,047.98

Approved By DIANE LANGOLF (DLANGOLF)

9/10/2013

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Supplier	Ship To	Bill To
FERGUSON ENTERPRISES INC. 2969 LAPEER RD. PORT HURON, MI 48060	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA F.O.B.	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA Terms
Phone Number (810) 987-3111	Shipper	
Fax Number (810) 987-5758		

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To		11/26/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-187225 3/4 X 20 FT PVC S80 PE PIPE STRUBLE Supplier #: P80PF Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	100.00	EA	\$0.45	\$44.93	\$0.00	\$44.93	63305	5500
2	NS-187226 1 X 20 FT PVC S80 PE PIPE Supplier #: P80PG Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	100.00	FT	\$0.66	\$66.46	\$0.00	\$66.46	63305	5500
3	NS-187227 3/4 PVC EPDM T/U BV Supplier #: FNW340NEF Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	2.00	FT	\$14.40	\$28.80	\$0.00	\$28.80	63305	5500
4	NS-187228 1 PVC EPDM T/U BV Supplier #: FNW340NEG Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$19.63	\$19.63	\$0.00	\$19.63	63305	5500
5	NS-187229 1 PVC S80 SXS 90 ELL Supplier #: P80S9G Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	30.00	EA	\$1.35	\$40.59	\$0.00	\$40.59	63305	5500
6	NS-187230 1 PVC S80 SXM ADPT Supplier #: P80SMAG Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	12.00	EA	\$2.66	\$31.86	\$0.00	\$31.86	63305	5500
7	NS-187231 3/4 PVC S80 SXS 90 ELL Supplier #: P80S9F Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	50.00	EA	\$0.84	\$42.00	\$0.00	\$42.00	63305	5500

Status Completed
 Amendment
 PO Date 11/26/2012
 Contract #
 Print Date 11/4/2013

**Supplier**

FERGUSON ENTERPRISES INC.
 2969 LAPEER RD.
 PORT HURON, MI 48060

Phone Number (810) 987-3111
 Fax Number (810) 987-5758

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order Yes Confirm To		Confirming Order No		Tax Exempt No 11/26/2012		Non-Exempt No		MSDS Required No	
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	NS-187232 3/4 PVC S80 SXM ADPT Supplier #: P80SMAF Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	12.00	EA	\$1.53	\$18.41	\$0.00	\$18.41	63305	5500
9	NS-187233 3X1 PVC SADDLE X SOC SGL OUTLET Supplier #: SP-S466335 Task #: 188696*6 Required: 11/22/12 Requested By: DAVE STRUBLE (DSTRUBLE)	3.00	EA	\$21.99	\$65.96	\$0.00	\$65.96	63305	5500
						Order Net	\$358.63		
						Order Tax	\$0.00		
						Order Total	\$358.63		

Approved By DIANE LANGOLF (DLANGOLF)

11/26/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 3/6/2013

Contract #

Print Date 11/4/2013

Supplier	Ship To	Bill To
D G R CONTRACTING 390 N. DECKER RD. MARLETTE, MI 48453	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA F.O.B.	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA Terms 2%/10, n30
Phone Number (989) 635-7354	Shipper	
Fax Number (989) 635-6664		

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To DON		3/6/2013		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-189573 FIBERGLASS TOP OF WATER SOFTENER TANK IN WASTE WATER PLANT - LABOR STRUBLE Task #: 127499*6 Required: 03/06/13 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$750.00	\$750.00	\$0.00	\$750.00	63400	5500
2	NS-189574 MATERIALS Task #: 127499*6 Required: 03/06/13 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$100.00	\$100.00	\$0.00	\$100.00	63400	5500
3	NS-189575 UNPLUG ROOF DRAINS IN ROD MILL ALONG BUILDING 71 Task #: 127499*6 Required: 03/06/13 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$400.00	\$400.00	\$0.00	\$400.00	63400	5500

Order Net	\$1,250.00
Order Tax	\$0.00
Order Total	\$1,250.00

Approved By DIANE LANGOLF (DLANGOLF)

3/6/2013

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

**Supplier**
 K L MC COY AND ASSOCIATES INC.
 P O BOX 24077
 DETROIT, MI 48224-4077

 Phone Number (313) 882-9565
 Fax Number (734) 452-8249
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order	Yes	Confirming Order	No	Tax Exempt	No	Non-Exempt	No	MSDS Required	No
Confirm To				7/30/2013					

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-193033 (1) Taco FI-2507, 3" x 2 1/2" base mounted end suction pump - 40 hp, 3450 rpm, 460/3, ODP, Prem Eff motor STRUBLE Task #: 13-01771*2 Required: 09/09/13 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$3,065.00	\$3,065.00	\$0.00	\$3,065.00	63305	5500

Order Net	\$3,065.00
Order Tax	\$0.00
Order Total	\$3,065.00

Approved By DIANE LANGOLF (DLANGOLF)

7/30/2013

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Supplier	Ship To	Bill To
TOTAL FILTRATION SERVICES 1271 RANKIN TROY, MI 48083	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA F.O.B.	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA Terms
Phone Number (248) 377-4004		
Fax Number (248) 475-8269	Shipper	

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

EXPERIMENTAL 1 MICRON FILTER CARTRIDGES FOR RO PRE-FILTER

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-193964 1 MICRON FILTERS FOR SHELCO RO PREFILTER UNIT -1u 30L CMBF PP DOE STRUBLE Supplier #: CMBF1-30NN Task #: 13-01771*3 Required: 09/10/13 Requested By: DAVE STRUBLE (DSTRUBLE)	48.00	EA	\$4.28	\$205.44	\$0.00	\$205.44	63305	5500

Order Net	\$205.44
Order Tax	\$0.00
Order Total	\$205.44

Approved By DIANE LANGOLF (DLANGOLF)

9/3/2013

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTHEAST MICHIGAN DISTRICT OFFICE



STEVEN E. CHESTER
DIRECTOR

April 15, 2009

Mr. Barry Munce,
Quality & Technical Services Manager
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060


Dear Mr. Munce:

SUBJECT: Mueller Brass Company; Consent Agreement and Final Order (Docket No.:
RCRA-05-2008-0016); RCRA Compliance and Closure
Site Identification No.: MID 005 357 504

Pursuant to language within Paragraph 77, RCRA Compliance and Closure of the subject Consent Agreement and Final Order (CAFO), this office has completed our review of the Mueller Industries, Inc., Proposed Closure Plan for the former Steam Cleaner Tank System (March 12, 2009 - Revision 1). It is our understanding that a copy of that document would have been forwarded to Mr. Michael Beedle of RCRA Branch, United States Environmental Protection Agency (USEPA), Region 5, pursuant to Paragraph 77 of the CAFO, and Paragraph 91, Notice of the CAFO. Staff review of the proposed closure plan has found it to be an acceptable document and, as such, approvable by this office.

Please contact me at the below telephone number or at DayJ@michigan.gov should you have questions or concerns regarding this approval or otherwise should you require additional information.

Sincerely,


James A. Day
Environmental Quality Analyst
Waste and Hazardous Materials Division
Southeast Michigan District Office
586-753-3835

cc: Mr. Michael Beedle, United States Environmental Protection Agency
Mr. Bradley C. Venman, NTH Consultants, Ltd.
Mr. Lawrence AuBuchon, DEQ
Mr. Richard Conforti, DEQ

CERTIFIED MAIL™



7005 1820 0004 9689 0687



Barry Munce
Quality & Technical Services Manager
Mueller Brass Co.
Industrial Products Division of Mueller Industries
2199 Lapeer Ave.
Port Huron, MI 48060
PH: 810.966.0279
bmunce@muellerindustries.com

March 16, 2008

United States Environmental Protection Agency
Land and Chemicals Division
Attn: Michael Beedle, LR-8J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Subject: Supplemental Environmental Project

Dear Mr. Beedle:

On March 31, 2006, the U.S. EPA conducted a hazardous waste assessment, as part of a multimedia inspection at Mueller Brass Company's facility (Mueller Brass) located at 2199 Lapeer Avenue in Port Huron, Michigan. As a result of that inspection, it was determined that Mueller Brass may have violated regulations under the Resource Conservation and Recovery Act (RCRA) 42 U.S.C. 6901 et seq., as amended.

A preliminary penalty of \$389,990 was determined based on the gravity and duration of the penalty. In response, Mueller Brass submitted a carefully thought out good faith offer to settle. The EPA made a counter offer to reduce the proposed penalty to \$222,742 (which included a 10% reduction for good faith). At that time, a discussion was undertaken concerning a Supplemental Environmental Project (SEP).

Several general conversations have taken place since concerning this SEP. The conversations have centered around, among other things, how the project fits under the U.S. EPA's SEP policy, the nature of the project, a discussion of the technology to be used, the amount of flow and pollutant reduction as well as the anticipated costs.

By way of this letter, Mueller Brass would like to detail the specifics concerning this project and asks that a portion of the cost of this SEP be applied to reduce and settle the amount of U.S. EPA's proposed penalty in this matter.

History

Mueller Brass Company is a manufacturer of non ferrous brass rod and forgings at this site. The company has been on site and in continuous operation since 1917. The

Mueller Brass Company's Wastewater Treatment System

Mueller Brass currently maintains a metal detoxification system for treatment of metals and neutralization of acidic rinse waters. The system is comprised of multiple incoming storage tanks, a two stage neutralization and precipitation process, two clarifiers, a sand filter and filter press. A lay out of the system can be found in attachment 3.

On average, Mueller Brass discharges approximately 170,000 gallons a day from its wastewater treatment system.

The metal constituents and loadings in the discharge can be found in attachment 4.

Description of Additional Treatment Types Under Consideration

The additional treatment proposed to reduce metal loadings and flow is to be by means of either ion exchange or reverse osmosis.

Ion exchange is a reversible chemical reaction wherein an ion from solution is exchanged for a similarly charged ion attached to an immobile solid particle. These solid ion exchange particles are either naturally occurring inorganic zeolites or synthetically produced organic resins. Each resin has a distinct number of mobile ion sites that set the maximum quantity of exchanges per unit of resin. Ion exchange resins are classified as cation exchangers which exchange hydrogen ions (H^+) for positively charged ions (such as nickel, copper and sodium) and ion exchangers which exchange hydroxyl ion (OH^-) for negatively charged ions (such as sulfates, chromates and chlorides.) Because the quantity of H^+ and OH^- ions are balanced, the result of the ion exchange treatment is relatively pure, neutral water.

The ion exchange resin will be regenerated with Sulfuric acid and sodium hydroxide. Both these chemicals are currently used in the existing wastewater treatment system. The regenerant will be sent to the front end of the existing wastewater treatment system.

The ion exchange system would be composed of a carbon filter for the removal of organics followed by dual beds of cation and ion resin. One bed of columns will be in use while the other bed of columns is being regenerated. The treated water from the ion exchange system will be stored in a surge tank and pumped back to the mill for use as required.

Reverse osmosis is a separation process that uses pressure to force a solution through a membrane. In most cases the membrane only allows water to pass through and retains the solutes i.e. salt ions. This process will generate approximately 10 to 20 %

A capital is currently being written for this project. We expect the project to be completed approximately 9 to 12 months after a purchase order is issued, currently anticipated to occur within 2-3 months. For the reason's outlined in Dykema Gosset's November 21, 2007 correspondence to you we believe this project clearly fits the criteria for a SEP as being highly beneficial to the environment.

We appreciate your consideration look forward to hearing from you in regards to this issue.

Sincerely,

A handwritten signature in black ink, appearing to read "Barry Munce", written over a circular stamp or seal.

Barry Munce
Manager of Quality & Technical Services

Charles
Mikalian/R5/USEPA/US
01/07/2008 10:40 AM

To
Subject Fw: Information Request

----- Forwarded by Charles Mikalian/R5/USEPA/US on 01/07/2008 10:40 AM -----



"Jacobs, Mark"
<MJacobs@dykema.com>
01/07/2008 10:32 AM

To
Subject FW: Information Request

Mark Jacobs
Dykema Gossett
400 Renaissance Center
Detroit, MI 48243
ph 313-568-6845
fx 313-568-6701
email mjacobs@dykema.com

From: Jacobs, Mark
Sent: Monday, January 07, 2008 11:29 AM
To: Jacobs, Mark
Subject: FW: Information Request

Mark Jacobs
Dykema Gossett
400 Renaissance Center
Detroit, MI 48243
ph 313-568-6845
fx 313-568-6701
email mjacobs@dykema.com

From: Barry Munce [mailto:bmunce@extrudedmetals.com]
Sent: Wednesday, December 12, 2007 11:44 AM
To: Jacobs, Mark

Notice from Dykema Gossett PLLC:

To comply with U.S. Treasury regulations, we advise you that any discussion of Federal tax issues in this communication was not intended or written to be used, and cannot be used, by any person (i) for the purpose of avoiding penalties that may be imposed by the Internal Revenue Service, or (ii) to promote, market or recommend to another party any matter addressed herein.

This Internet message may contain information that is privileged, confidential, and exempt from disclosure. It is intended for use only by the person to whom it is addressed. If you have received this in error, please (1) do not forward or use this information in any way; and (2) contact me immediately.

Neither this information block, the typed name of the sender, nor anything else in this message is intended to constitute an electronic signature unless a specific statement to the contrary is included in this message.

DYKEMA



Informational Request for Water Reduction Quotes.doc Pollutant Loading wwtp sand filter effluent.xls

**Informational Request
for
Water Reduction Quotes**

1. Amount of flow to be treated? Max? Average? (Max) - Chem-Aqua has quoted a 250 gpm (360,000 gpd) Reverse Osmosis system. (Avg.) – could likely be assumed in the range of 200,000 gpd.
2. Pollutant load reduction to POTW – ppm /and or mass
Attached. Per Chem-Aqua, we could reduce our pollutant loading by 95% with Reverse Osmosis technology.
3. Technology to be used? R.O. versus Ion Exchange, or other
No conclusion at this time. Reverse Osmosis is scheduled to be pilot tested in December 2007.
4. Processes affected by the technology? At this time, at least 6 processes would be affected, including the water treatment plant. They are: #3 caster, #4 caster, #5 extruder, inductor water, center bay cleaning station. Other processes could be added as we proceed forward.
5. Cost of the technology? Reverse Osmosis has been quoted at: \$191,971.00.
Ion exchange has been quoted at \$217,451.00

Pollutant Loading

Constituent	ppb	lbs/year	Comments
O & G	5000	2743.86	
Cu	120	65.85	
Zn	905	496.64	
Pb	156	85.61	
TSS	1300	713.40	
Cr	30	16.46	
Ni	30	16.46	
Fe	270	148.17	
Al	90	49.39	
Mn	20	10.98	
Ortho Phos	100	54.88	
Si(Silica)	600	329.26	
Na	291000	159692.65	
Sulfate	192000	105364.22	
Ca	123000	67498.96	
Mg	34000	18658.25	
Bicarbonate	58000	31828.78	
Carbonate	150000	82315.80	
Chloride	217000	119083.52	

Total lbs/yr **589173.14**

In discussions with Chem-Aqua, an R.O. system will reduce pollutant loading 95%.
 Therefore: $589,173.14 \times 95\% (.95) =$ a pollutant load reduction of 559,714.48 lbs/annually

Chem-Aqua analysis
POTW analysis
Test America analysis

formula = $(.00834)(65.8 = 2006 \text{ total wwtp gallons processed})(\text{ppb})$

All analysis is derived from wwtp sand filter effluent samples and represent max pollutant for any one day



Barry Munce
Quality & Technical Services Manager
Mueller Brass Co.
Industrial Products Division of Mueller Industries
2199 Lapeer Ave.
Port Huron, MI 48060
PH: 810.966.0279
bmunce@muellerindustries.com

March 16, 2008

United States Environmental Protection Agency
Land and Chemicals Division
Attn: Michael Beedle, LR-8J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Subject: Supplemental Environmental Project

Dear Mr. Beedle:

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A preliminary penalty of \$389,990 was determined based on the gravity and duration of the penalty. In response, Mueller Brass submitted a carefully thought out good faith offer to settle. The EPA made a counter offer to reduce the proposed penalty to \$222,742 (which included a 10% reduction for good faith). At that time, a discussion was undertaken concerning a Supplemental Environmental Project (SEP).

Several general conversations have taken place since concerning this SEP. The conversations have centered around, among other things, how the project fits under the U.S. EPA's SEP policy, the nature of the project, a discussion of the technology to be used, the amount of flow and pollutant reduction as well as the anticipated costs.

By way of this letter, Mueller Brass would like to detail the specifics concerning this project and asks that a portion of the cost of this SEP be applied to reduce and settle the amount of U.S. EPA's proposed penalty in this matter.

History

Mueller Brass Company is a manufacturer of non ferrous brass rod and forgings at this site. The company has been on site and in continuous operation since 1917. The

company supplied the first commercially available forging and is the inventor of the copper water tube soldered fittings system.

As producers of non ferrous metal products, process waters containing dissolved metal constituents are generated. Process waters from the plant are collected and conveyed to an onsite wastewater system for treatment. After treatment, the water is discharged to the City of Port Huron sanitary sewer system for processing in their secondary treatment system for sanitary waste.

The city discharges its treated water to the St. Clair River which is a portion of the St. Lawrence Seaway and the Great Lakes water system.

Mueller Brass currently maintains two discharge permits from the City of Port Huron for its sanitary sewer system. The first is a federal pretreatment permit (see attachment 1) for discharge of treated process water as promulgated in the Code of Federal Regulations 40 CFR) Parts 9, 122 and 403. The second is a municipal permit (see attachment 2) for discharge of sanitary waste to the city's sanitary sewer system. The City of Port Huron acts as the control authority for both of these permits.

There is no discharge of storm water from this facility. The storm water is collected and used as contact cooling water at various processes within the plant. Once used as contact cooling water, the storm water becomes process water by definition and as such is allowed to be treated in Mueller's on site waste treatment system and discharged to the City of Port Huron sanitary sewer system. The discharge is regulated under the permits detailed above.

The SEP

As mentioned in the last paragraph above, Mueller Brass has eliminated the discharge of storm water to surface waters of the State of Michigan. Mueller Brass would now like to reduce the discharge of process water to the City of Port Huron's sanitary sewer system.

Since the facility is a producer of brass rod and forgings the primary pollutants of concern are metals. The SEP would focus on this issue. In general, the SEP would take the treated waters from the onsite treatment system which are currently being discharged to the City of Port Huron and provide additional treatment. This additional treatment would reduce the current metal loading to the city by 90 – 95% and reduce the wastewater discharge flow volumes from the treatment system to the city by 80 to 90%.

Since the city's system is designed for sanitary waste treatment, there is minimal removal of metals, and they pass, for the most part, through the system and are discharged to the environment. The metals recovered from the additional treatment, would be collected and sent off site for recycling in place of being sent to a landfill.

The specifics of the SEP are outlined below.

Mueller Brass Company's Wastewater Treatment System

Mueller Brass currently maintains a metal detoxification system for treatment of metals and neutralization of acidic rinse waters. The system is comprised of multiple incoming storage tanks, a two stage neutralization and precipitation process, two clarifiers, a sand filter and filter press. A lay out of the system can be found in attachment 3.

On average, Mueller Brass discharges approximately 170,000 gallons a day from its wastewater treatment system.

The metal constituents and loadings in the discharge can be found in attachment 4.

Description of Additional Treatment Types Under Consideration

The additional treatment proposed to reduce metal loadings and flow is to be by means of either ion exchange or reverse osmosis.

Ion exchange is a reversible chemical reaction wherein an ion from solution is exchanged for a similarly charged ion attached to an immobile solid particle. These solid ion exchange particles are either naturally occurring inorganic zeolites or synthetically produced organic resins. Each resin has a distinct number of mobile ion sites that set the maximum quantity of exchanges per unit of resin. Ion exchange resins are classified as cation exchangers which exchange hydrogen ions (H^+) for positively charged ions (such as nickel, copper and sodium) and ion exchangers which exchange hydroxyl ion (OH^-) for negatively charged ions (such as sulfates, chromates and chlorides.) Because the quantity of H^+ and OH^- ions are balanced, the result of the ion exchange treatment is relatively pure, neutral water.

The ion exchange resin will be regenerated with Sulfuric acid and sodium hydroxide. Both these chemicals are currently used in the existing wastewater treatment system. The regenerant will be sent to the front end of the existing wastewater treatment system.

The ion exchange system would be composed of a carbon filter for the removal of organics followed by dual beds of cation and ion resin. One bed of columns will be in use while the other bed of columns is being regenerated. The treated water from the ion exchange system will be stored in a surge tank and pumped back to the mill for use as required.

Reverse osmosis is a separation process that uses pressure to force a solution through a membrane. In most cases the membrane only allows water to pass through and retains the solutes i.e. salt ions. This process will generate approximately 10 to 20 %

reject rate. This reject water will be sent to the front of the current wastewater treatment system.

The reverse osmosis system would be composed of a membrane and membrane washing system to clean the membrane. The treated water from the reverse osmosis system will be stored in a surge tank and pumped back to the mill for use as required

Description of Process Changes with the Addition of New Treatment Equipment

Process wastewater will continue to be routed from operations in the mill to the existing metal detoxification wastewater treatment system described earlier. The existing system is to be split, one side treating the existing incoming water from the mill, which will then be routed to the new treatment system, and the other side treating only the reject water from the new treatment equipment to remove the metals.

The effluent from the additional treatment system will be discharged to the city sanitary sewer.

Captured storm water will continue to be used as contact cooling water in the casting shop.

Pollutant and Flow Reduction

The SEP will reduce the discharge flow by 80 to 90 %. The current flow in gallons per day is 170,000 on average. An 80 % reduction would reduce the discharge to approximately 34,000 gallons per day.

Metal loading reduction in pounds for Copper, Zinc, Lead, nickel, Iron, Aluminum and Manganese, all of which are components of brass will be approximately 823 lbs per year.

Metal loading calculations can be found in attachment.

Project Cost

Based on the proposals currently under review, the expected cost for this Project is currently anticipated to be approximately \$700,000.00. This includes the quoted costs of design, purchase and installation plus in hose cost for piping, pumps etc.

This amount may change slightly based on the final decision regarding treatment type selected.

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits. 		A. Received by (Please Print Clearly) ROD THOMPSON B. Date of Delivery MAY 14 2007	
1. Article Addressed to:		C. Signature <i>[Signature]</i> <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee	
2. Article Description (If Restricted Delivery is desired, attach this card to the back of the mailpiece, or on the front if space permits.)		<input type="checkbox"/> Every address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> Enter delivery address below: <input type="checkbox"/> No	
3. Service Type		<input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes			
PS Form 3849, March 2001		Domestic Return Receipt	
7001 0320 0006 0292 5960		102595-01-M-1424	

John Wagner
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, MI 48060

Waste, Pesticides and Toxics Division
Enforcement and Compliance Assurance Branch
Inspection Letter Signoff



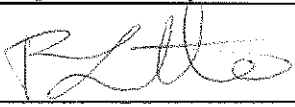
Type of Document: ☒ Information Request

Facility Name and Location and Id:

Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060
MID 005 357 504

Assigned Staff:

Phone:

Name	Signature	Date
Author	Michael Beedle 	May 7, 2007
Regional Counsel	<i>Chick Mikshor</i> 	5/7/07
Section Chief		5-10-07

Directions/Request for Clerical Support:

After the Section Chief signs this sheet and original letter:

1. Date stamp the cover letter;
2. Make four copies of the contents of this folder:
 - One copy for the assigned staff;
 - One copy for the section file;
 - One copy for the branch file; and
 - One copy for the official file, 7th floor File Room.
3. Make any additional copies for cc's or bcc's.
4. Mail the original letter and a copy of the original inspection report certified mail and distribute office copies and cc's and bcc's.

Note: The Original Signed Inspection Report should be sent to the 7th Floor File Room with a copy of the Inspection Letter. This is the official file copy.

Once the certified mail receipt is returned:

5. File the certified mail receipt (green card), with this sign-off sheet and the official file copy, and take to 7th floor RCRA file room;
6. E-mail staff the date that the letter was received by facility.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAY 11 2007

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REPLY TO THE ATTENTION OF:

DE-9J

John Wagner
Corporate Director of Environmental Affairs
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060

REQUEST FOR INFORMATION
MID005357504

Dear Mr. Wagner:

The United States Environmental Protection Agency (U.S. EPA) is requesting information under Section 3007 of the Resource Conservation Act (RCRA), as amended, 42 U.S.C. § 6927. Section 3007 authorizes the Administrator of U.S. EPA to require you to submit certain information.

This request requires Mueller Brass to submit information relating to waste management at its facility located in Port Huron, Michigan. We are requiring this information to determine the facility's compliance with the Solid Waste Disposal Act, as amended, 42 U.S.C. § 6901 et seq., and the regulations promulgated thereunder. Attachment 1 specifies the information you must submit. You must submit this information within twenty-one (21) calendar days of receiving this request to the United States Environmental Protection Agency, Attention: Michael Beedle, 77 West Jackson Boulevard, DE-9J, Chicago, Illinois 60604.

You may, under 40 CFR Part 2 Subpart B, assert a business confidentiality claim covering all or part of the information in the manner described in 40 CFR 2.203(b). We will disclose the information covered by a business confidentiality claim only to the extent and by means of the procedures at 40 CFR Part 2, Subpart B. You must make any request for confidentiality when you submit the information since any information not so identified may be made available to the public without further notice.

Mueller Brass must submit all requested information under an authorized signature certifying that the information is true and complete to the best of the signatory's knowledge and belief. Should the signatory find, at any time after submitting the requested information, that any portion of the submitted information is false, misleading or incomplete, the signatory should notify us. Knowingly providing false information, in response to this request, may be actionable under 18 U.S.C. §§ 1001 and 1341. We may use the requested information in an administrative, civil, or criminal action.

This request is not subject to the Paperwork Reduction Act, U.S.C. § 3501 et seq., because it seeks collection of information from specific individuals or entities as part of an administrative action or investigation. Failure to comply fully with this request for information may subject Mueller Brass to an enforcement action under Section 3008 of RCRA, 42 U.S.C. § 6928. You should direct questions about this request for information to Michael Beedle at (312) 353-7922.

Sincerely,

A handwritten signature in cursive script that reads "Paul Little".

Paul Little, Chief
Compliance Section 2
Enforcement Compliance Assurance Branch
Waste, Pesticides and Toxics Division

cc:

Tom Sampson, MDEQ

ATTACHMENT 1

Instructions: You must respond separately to each of the questions or requests in this attachment. Precede each answer with the number of the Request for Information to which it corresponds. Where used below, "Facility" refers to the Mueller Brass Company facility located at 2199 Lapeer Avenue, Port Huron, Michigan. For each document produced in response to this Request for Information, indicate on the document, or in some other reasonable manner, the number of the question to which it responds. The definitions of 40 Code of Federal Regulations (Parts 260-279) and Michigan Department of Environmental Quality Hazardous Waste Management Rules are applicable to this request.

Requests

1. Identify all persons consulted in preparing the answers to this Request for Information and the previous Request for Information dated February 20, 2007. Provide the full name and title for each person identified, business telephone number for each individual identified and the number of years that each identified individual has worked for or at Mueller Brass.
2. Identify all persons who have used the steam cleaning equipment at the Steam Cleaning Pit in the past four years. Provide the full name and title for each person identified, business telephone number for each individual identified, the number of years that each identified individual has worked for or at Mueller Brass, and that person's supervisor.
3. Provide an estimate of the frequency that parts were steam cleaned at the Steam Cleaning Pit. For example: the pit was used three times per week to clean parts. Estimate the maximum and minimum volume of water used per cleaning.
4. Describe the process by which parts were selected for cleaning at the Steam Cleaning Pit.
5. Identifying the type of parts that were cleaned at the Steam Cleaning Pit. For each type of part:
 - a. identify the manufacturing process that the part came from;
 - b. indicate whether the manufacturing process had to be shut down in order to clean that type of part; and
 - c. identify the metals used in that manufacturing process.
6. Provide all records that identify or discuss part cleaning at the Steam Cleaning Pit for the past four years.

End of Requests



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 20 2007

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REPLY TO THE ATTENTION OF:

DE-9J

John Wagner
Corporate Director of Environmental Affairs
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060

REQUEST FOR INFORMATION
MID005357504

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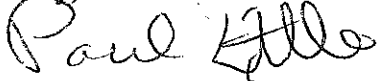
This request requires Mueller Brass to submit information relating to waste management at its facility located in Port Huron, Michigan. We are requiring this information to determine the facility's compliance with the Solid Waste Disposal Act, as amended, 42 U.S.C. § 6901 et seq., and the regulations promulgated thereunder. Attachment 1 specifies the information you must submit. You must submit this information within thirty (30) calendar days of receiving this request to the United States Environmental Protection Agency, Attention: Michael Beedle, 77 West Jackson Boulevard, DE-9J, Chicago, Illinois 60604.

You may, under 40 CFR Part 2 Subpart B, assert a business confidentiality claim covering all or part of the information in the manner described in 40 CFR 2.203(b). We will disclose the information covered by a business confidentiality claim only to the extent and by means of the procedures at 40 CFR Part 2, Subpart B. You must make any request for confidentiality when you submit the information since any information not so identified may be made available to the public without further notice.

Mueller Brass must submit all requested information under an authorized signature certifying that the information is true and complete to the best of the signatory's knowledge and belief. Should the signatory find, at any time after submitting the requested information, that any portion of the submitted information is false, misleading or incomplete, the signatory should notify us. Knowingly providing false information, in response to this request, may be actionable under 18 U.S.C. §§ 1001 and 1341. We may use the requested information in an administrative, civil, or criminal action.

This request is not subject to the Paperwork Reduction Act, U.S.C. § 3501 et seq., because it seeks collection of information from specific individuals or entities as part of an administrative action or investigation. Failure to comply fully with this request for information may subject Mueller Brass to an enforcement action under Section 3008 of RCRA, 42 U.S.C. § 6928. You should direct questions about this request for information to Michael Beedle at (312) 353-7922.

Sincerely,

A handwritten signature in cursive script that reads "Paul Little".

Paul Little, Chief
Compliance Section 2
Enforcement Compliance Assurance Branch
Waste, Pesticides and Toxics Division

cc:

Tom Sampson, MDEQ

ATTACHMENT 1

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Requests

Steam Cleaning Tank System

1. Identify the date that Steam Cleaning tank system was first constructed. Describe and provide the date of each modification to this tank system.
2. Identify the date that the Steam Cleaning tank system was first used to manage hazardous waste. Describe the hazardous waste and provide all waste determinations, waste profiles, and waste analysis for the wastes managed in this tank system.
3. Provide a description of the steam cleaning process, including waste generation, prior to April 1, 2006, and all subsequent changes to the process. Include in the description, the liquid removal frequency from the Steam Cleaning tank system in-ground sump and the plastic tank. Detail whether or not the in-ground sump of this tank system has managed hazardous waste after April 1, 2006.
4. Provide physical description of the Steam Cleaning tank system in-ground sump, including:
Dimensions;
Description (including thickness) of material between bottom of the sump and ground;
Construction material; and
Identify any cracks/pipes/drains or other means through which materials could exit from the sump.
5. Provide all diagrams, drawings, schematics and blueprints that show the Steam Cleaning tank system or components of the system.
6. Identify and provide each hazardous waste permit application, construction permit, operation license, and permit issued or applied for under Michigan Department of Environmental Quality (MDEQ) rules and United State Environmental Protection Agency (U.S. EPA) regulations for the Steam Cleaning tank system.

7. Describe the secondary containment and leachate collection system at the in-ground sump of the Steam Cleaning tank system.
8. Provide all tank certifications and integrity assessments performed for the Steam Cleaning tank system.
9. Provide all inspection records of the Steam Cleaning tanks system for the time period between: January 1, 2003, and the date of your response to this Request for Information.
10. Provide all hazardous waste inventories for the Steam Cleaning tank system for the time period between: January 1, 2003, and the date of your response to this Request for Information.
11. Provide all hazardous waste manifests, shipping documents, waste analysis, waste profiles and land disposal restriction notifications for waste removed from the Steam Cleaning tank system for the time period between: January 1, 2003, and the date of your response to this Request for Information.
12. Provide all closure plans, closure cost estimates, closure certifications, and closure related documents for the Steam Cleaning tank system.

Formed Tube Alkaline Cleaner Tank System

13. Identify the date that the Formed Tube Alkaline Cleaner tank system was first constructed. Describe and provide the date of each modification to this tank system.
14. Identify the date that the Formed Tube Alkaline Cleaner tank system was first used to manage hazardous waste. Describe the hazardous waste and provide all waste determinations, waste profiles, and waste analysis for the wastes managed in this tank system.
15. Provide a description of the steam cleaning process, including waste generation, prior to April 1, 2006, and all subsequent changes to the process. Include in the description, the liquid removal frequency from the Formed Tube Alkaline Cleaner tank system in-ground sump and the plastic tank. Detail whether or not the in-ground sump of this tank system has after April 1, 2006, or still manages hazardous waste.
16. Provide physical description of the Formed Tube Alkaline Cleaner tank system in-ground sump, including:
 - Dimensions;
 - Description (including thickness) of material between bottom of the sump and ground;
 - Construction material; and
 - Identify any cracks/pipes/drains or other means that materials could exit from the sump.
17. Provide all diagrams, drawings, schematics and blueprints that show the Formed Tube

Alkaline Cleaner tank system or components of the system.

18. Identify and provide each hazardous waste construction permit application, operating license, application and permit issued or applied for under Michigan Department of Environmental Quality (MDEQ) rules and U.S. EPA regulations for the Formed Tube Alkaline Cleaner tank system.
19. Describe the secondary containment and leachate collection system of the in-ground sump at the Formed Tube Alkaline Cleaner tank system.
20. Provide all tank certifications and integrity assessments performed for the Formed Tube Alkaline Cleaner tank system.
21. Provide all inspection records of the Formed Tube Alkaline Cleaner tank system for the time period between: January 1, 2003, and the date of your response to this Request for Information.
22. Provide all hazardous waste inventories for the Formed Tube Alkaline Cleaner tank system for the time period between: January 1, 2003, and the date of your response to this Request for Information.
23. Provide all hazardous waste manifests, shipping documents, waste analysis, waste profiles and land disposal restriction notifications for waste removed from the Formed Tube Alkaline Cleaner tank system for the time period between: January 1, 2003, and the date of your response to this Request for Information.
24. Provide all closure plans, closure cost estimates, closure certifications, and closure related documents for the Formed Tube Alkaline Cleaner tank system.

End of Requests.




Waste, Pesticides and Toxics Division
Enforcement and Compliance Assurance Branch
Inspection Letter Signoff

Type of Document: ☒ Information Request

Facility Name and Location and Id:
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060
MID 005 357 504

Assigned Staff:

Phone:

Name	Signature	Date
Author	Michael Beedle 	February 2, 2007
Regional Counsel		2/14/07
Section Chief		2-16-07

Directions/Request for Clerical Support:

After the Section Chief signs this sheet and original letter:

1. Date stamp the cover letter;
2. Make four copies of the contents of this folder:
 - One copy for the assigned staff;
 - One copy for the section file;
 - One copy for the branch file; and
 - One copy for the official file, 7th floor File Room.
3. Make any additional copies for cc's or bcc's.
4. Mail the original letter and a copy of the original inspection report certified mail and distribute office copies and cc's and bcc's.

Note: The Original Signed Inspection Report should be sent to the 7th Floor File Room with a copy of the Inspection Letter. This is the official file copy.

Once the certified mail receipt is returned:

5. File the certified mail receipt (green card), with this sign-off sheet and the official file copy, and take to 7th floor RCRA file room;
6. E-mail staff the date that the letter was received by facility.

Via Certified Mail #7004 2510 0006 3308 6465

November 22, 2006



Mr. Michael Beedle
United States Environmental Protection Agency
77 West Jackson Boulevard
DE-9J
Chicago, Illinois 60604

Re: Mueller Brass Notice of Violation

Dear Mr. Beedle:

This letter is in response to U.S. EPA's Notice of Violation ("NOV") issued to Mueller Brass Company on October 25, 2006. The NOV outlines eight (8) alleged violations of RCRA and its regulations based on inspections U.S. EPA conducted on March 30 and March 31, 2006. In the NOV, U.S. EPA requests that Mueller Brass "submit a response in writing . . . documenting the actions, if any, which have been taken since the inspection to establish compliance. . ." The NOV also indicates that no further action is required with respect to items 6, 7 and 8. Without admission of liability for the allegations contained in the NOV, Mueller Brass provides the following documentation of its compliance with the regulations described in items 1 through 5. As shown below, within one (1) day of the conclusion of the U.S. EPA's inspection, Mueller Brass came into compliance by entirely terminating the operation of the steam cleaning tank system and commencing daily inspections of the formed tube alkaline cleaner tanks, followed by removal and disposal of the contents of all of those tanks.

Alleged Violations 1-5, Steam Cleaning Tank System.

Mueller Brass infrequently used the steam cleaning tank system to clean small parts in connection with periodic part maintenance and repair operations. Washwater was collected in a concrete lined pit and was periodically pumped to a cross-linked polypropylene above-ground tank situated adjacent to the pit. Available records indicate that, between September 18, 2003 and December 9, 2005, 1,228 gallons of steam cleaning washwater was generated, equating to an average of approximately 82 gallons per month. At the time of the inspection, approximately 110 gallons of washwater was contained in the pit, equating to an average of approximately 30 gallons per month.

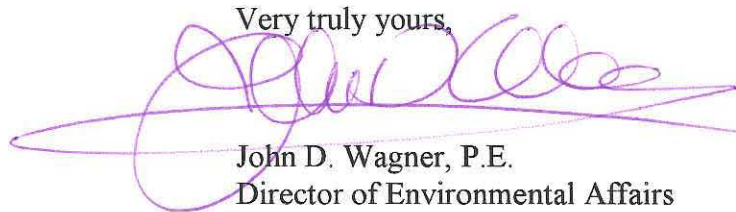
On April 1, 2006, the contents of the pit were completely removed and transferred to two (2) 55 gallon drums. The drums were labeled and placed in Mueller Brass's hazardous waste drum storage area. The polypropylene tank was similarly removed from the room and placed in the drum storage area. The drums were shipped off-site for disposal on May 9, 2006. See, Exhibit A. Photo documentation is contained in Exhibit B. Effective April 1, 2006, Mueller Brass permanently discontinued the steam cleaning operation, and the room in which those activities were previously conducted has been closed and padlocked.

Alleged Violation 4 – Formed Tube Alkaline Cleaner Tanks.

At the time of the inspection, Mueller Brass was in the process of decommissioning its Formed Tube operation for relocation to its facility in Tennessee. Beginning on March 23, 2006, Mueller Brass had commenced daily inspection of the tanks. Daily inspection logs are attached as Exhibit C. Mueller conducted daily inspections on each day the facility was in operation, except for two days when the environmental manager was sick and provisions for a backup inspector had not yet been made. On April 21, 2006, the contents of the formed tube alkaline cleaner tanks were removed and transferred to a tank truck and shipped for off-site disposal. Manifests documenting that disposal are attached as Exhibit D. All formed tube alkaline cleaner tanks operations have been discontinued since April 21, 2006.

As shown above, by no later than one day after conclusion of U.S. EPA's inspection, Mueller Brass corrected the conditions addressed in the NOV. We hope this information satisfactorily addresses the issues raised in the NOV. If you have any further questions, or require any additional information, please feel free to contact me at any time.

Very truly yours,



John D. Wagner, P.E.
Director of Environmental Affairs

Attachments

Exhibit A

Manifest of 9 May 2006



WASTE AND HAZARDOUS MATERIALS DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Required under authority of Part 111
and Part 121 of Act 451, 1994, as
amended.

Failure to file may subject you to criminal
and/or civil penalties under Section
324.11151 or 324.12116 MCL.

Form Approved OMB No. 2050-0039

Please print or type

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. MID005357504	Manifest Document No. 84773	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Mueller Brass 2199 Lapeer Rd. Port Huron, MI 48060			A. State Manifest Document Number MI 10184773		B. State Generator's ID
4. Generator's Phone (810) 997-7770			C. State Transporter's ID		D. Transporter's Phone 313-924-2642
5. Transporter 1 Company Name DVS Transportation			6. US EPA ID Number MTR000019554		E. State Transporter's ID
7. Transporter 2 Company Name			8. US EPA ID Number		F. Transporter's Phone
9. Designated Facility Name and Site Address Dyncol, Inc. - CMF 6520 Georgia St. Detroit, MI 48211			10. US EPA ID Number MID074259565		G. State Facility's ID
			H. Facility's Phone (313) 571-7141		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and HM ID NUMBER)			12. Containers No. Type	13. Total Quantity	14. Unit Vol/Vol
a. X RQ, Waste Aerosols, flammable, 2.1, UN1950			001-DF	00125	EST. P D001
b. X RQ, Hazardous waste, liquid, n.o.s., 9, HA3082, III, (Lead)			003-DF	00165	G D008
c. X RQ, Hazardous waste, solid, n.o.s., 9, HA3077, III, (Lead)			023-DF	03900	EST. B D008
d. Non-hazardous waste Solid			001-DF	00055	G NONE
J. Additional Descriptions for Materials Listed Above					K. Handling Codes for Wastes Listed Above
A. Approval #165957.1 (Lab pack (aerosols))					A.
B. Approval #165956 (Grinding Dust, PPE and water)					B.
C. Approval #115052 (Grinding Dust)					C.
D. Approval #165843 (Non-Hazardous Solids)					D.
15. Special Handling Instructions and Additional Information					
24 HOUR EMERGENCY PHONE (313) 571-7141 ERG MUST BE KEPT IN VEHICLE					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; If I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name DOUG WESTBROOK			Signature 		Date 05/09/06
17. Transporter 1 Acknowledgement of Receipt of Materials			Signature 		Date 05/09/06
Printed/Typed Name John Thomachotek			Signature 		Date 05/09/06
18. Transporter 2 Acknowledgement of Receipt of Materials			Signature		Date
Printed/Typed Name			Signature		Date
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name			Signature		Date

MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4708 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE 1-800-424-9602 24 HOURS PER DAY.

Exhibit B

Drum Photos – Steam Cleaning Pit & Tank Waste

The pit/sump measurements cited in Mark Maloney's follow up memorandum to Mike Beedle dated April 6, 2006 were $4' \times 6' \times 3' = 72 \text{ ft}^3$. At 7.48 gal/ft^3 this equates to approx. 500 gal volume.

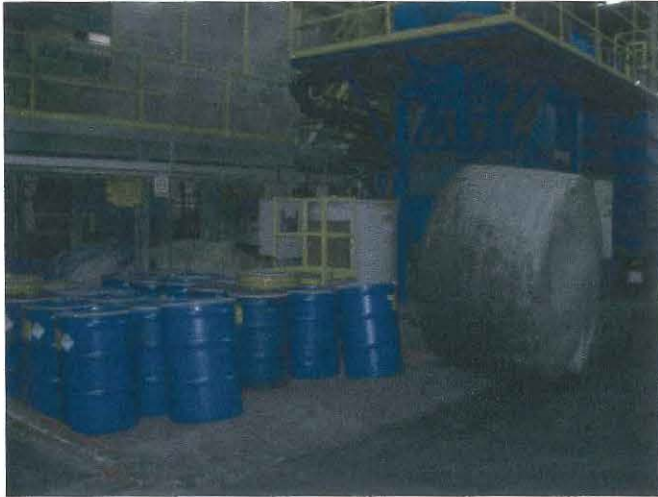
There were approx 110 gallons of steam wash water/waste in the sump; the poly tank was empty at the time of the inspection



On April 1, 2006, the contents of the sump were transferred to two 55 gallon drums.



Both the tank and two 55-gallon drums were placed in the HW drum storage area in the WWTP building. (See photo on next page.)



The steam cleaning operation was permanently discontinued effective April 1, 2006, and the room in which the operation was conducted previously was padlocked.



Exhibit C

Daily Inspection Log Form Tube Alkaline Cleaner Tanks

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-23-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
ACTION TAKEN		

TANK AREA:


LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-24-04</u>	INSPECTOR: <u></u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
ACTION TAKEN		

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-27-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-28-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>	
ITEM	SYMBOL	COMMENTS	ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-29-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-30-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
ACTION TAKEN		

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-31-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4-5-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
ACTION TAKEN		

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4-6-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA:

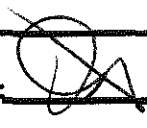
LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4-2-02</u>	INSPECTOR: <u></u>	HAZARDOUS CODE: <u>D002</u>	
ITEM	SYMBOL	COMMENTS	ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4-10-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
ACTION TAKEN		

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4-11-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
ACTION TAKEN		

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4-2-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4/3/06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
ACTION TAKEN		

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4/7/06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4-18-06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA:

LEAKS:	Y <u>(N)</u>		
LEAKS FROM PIPES:	Y <u>(N)</u>		
CONDITION OF OUTLET PIPING:	<u>(S)</u> U		
VALVES CLOSED WHEN NOT IN USE:	<u>(Y)</u> N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<u>(Y)</u> N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4/5/06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
ACTION TAKEN		

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4/20/06</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>	
ITEM	SYMBOL	COMMENTS	ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

ABSOLUTE
4-21-02

TANKS EMPTIED
NO LONGER ACTIVE

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>4-21-02</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>	
ITEM	SYMBOL	COMMENTS	ACTION TAKEN

TANK AREA:

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

Exhibit D

Manifest of 21 April 2006
Form Tube Alkaline Cleaner Tanks Waste



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Part 121 of Act 451, 1994, as amended.

Failure to file may subject you to
criminal and/or civil penalties under
Sections 324.11151 or 324.12116 MCL.

Please print or type.

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.
MID005357504

Manifest
Document No.
02522

2. Page 1
of 1

Information in the shaded areas
is not required by Federal law.

3. Generator's Name and Mailing Address
MUELLER BRASS COMPANY
2199 LAPEER AVENUE

4. ~~PORT HURON~~ MI 48060

(810) 987-7770

5. Transporter 1 Company Name
MARINE POLLUTION CONTROL (MPC)

6. US EPA ID Number
MID049277718

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
MICHIGAN DISPOSAL WATER TREATMENT PLANT
49350 N. I-94 SERVICE DRIVE
BELLEVILLE, MI 48111

10. US EPA ID Number
MID000724831

A. State Manifest Document Number
MI 10257707

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone (313) 849-2333

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone
(734) 697-7830

11. US DOT Description (including Proper Shipping Name, Hazard Class, and
ID NUMBER).
HM

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt./Vol

I. Waste
No.

a. X WASTE CORROSIVE LIQUID, N.O.S.
8, UN 1760, PGI (CONTAINS SODIUM HYDROXIDE)

001

TT

1497

G

D002

H

J. Additional Descriptions for Materials Listed Above

A) APPROVAL # 111896 MM - WASTE ALKALINE
CLEANING SOLUTION

K. Handling Codes

a

b

c

d

15. Special Handling Instructions and Additional Information

IF SPILLED, PREVENT FROM ENTERING GROUND WATER OR SEWER SYSTEM. WASH WITH SOAP
AND WATER AFTER HANDLING. SEE ERG 154

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are
classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government
regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have
determined to be economically practicable and that I have selected the practicable method of treatment storage, or disposal currently available to me which minimizes
the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste
generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

DOUG WESTBROOK

Signature

[Signature]

Date

Month Day Year

04 21 06

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Charles L Varnos

Signature

[Signature]

Date

Month Day Year

04 21 06

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Date

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Date

Month Day Year

Monday, March 26, 2007

Via Federal Express #855794785²⁵⁴



Mr. Michael Beedle
U.S. EPA
77 West Jackson Boulevard
Chicago, IL 60604

Info
Request
Response

Re: Mueller Brass Company's Response
To Request for Information
MID005357504

Dear Mr. Beedle:

Mueller Brass Company submits the attached responses to U.S. EPA's Request for Information, dated February 20, 2007. The specific responses are provided based on a reasonable and diligent record review and discussion with potentially knowledgeable company representatives. To the extent additional information or documents responsive to this Request become known or available to Mueller Brass after the date of this Response that were not known or available to Mueller Brass as of the date of this Response, Mueller Brass will promptly submit a supplement to this Response to U.S. EPA.

Very truly yours,

MUELLER BRASS COMPANY



John Wagner

Director Environmental Affairs

pc: Mark D. Jacobs, Esq.

DET02\246711.1
ID\MDJ

Mueller Brass Company submits the following responses to U.S. EPA's Request for Information, dated February 20, 2007. The specific responses set forth below are provided based on a reasonable and diligent record review and discussion with potentially knowledgeable company representatives. To the extent additional information or documents responsive to this Request become known or available to Mueller Brass after the date of this Response that were not known or available to Mueller Brass as of the date of this Response, Mueller Brass will promptly submit a supplement to this Response to U.S. EPA.

CERTIFICATION

I certify that all information contained herein is true and accurate to the best of my knowledge and belief. The attachments to this response are true and authentic to the best of my knowledge and belief.



26 March 2007

John D Wagner
Director Environmental Affairs
Mueller Brass Company

Mueller Brass Company's Response to EPA's Demand Descriptions & Document List

#1 Date certain is unknown but believed to be sometime in early 1995. There were no modifications following construction.

#2 The earliest date known to manage HazWaste would be the date of the first waste characterization which was 17 Feb 1995. The Haz Waste generated was water with suspended solids that fail TCLP for lead. The initial characterization also identified cadmium above the HW threshold. Requested documents enclosed.

#3 Various small parts in need of repair work by maintenance and which were dirty to work on would be cleaned by use of a steam hose and nozzle directed at the part situated on a grate over the collection pit and washing the dirt off. Both the dirt and condensed steam would accumulate in the grated pit. Periodically, the accumulated material was removed from the steam cleaning process by pumping this material from the collection pit to a holding tank where it would subsequently be emptied and shipped for disposal.

The frequency of the liquid removal was not recorded but generally transfer to the tank when sufficient liquid accumulated such that the sump pump could pump to the tank, i.e. a head of a few inches or more.

The tank contents were removed periodically when the tank was approaching a full condition. No hazardous waste has been managed in this system since 1 April 2006.

#4 Description See the enclosed sketch for the Steam Cleaning Pit and dimensions. The sump (tank) was constructed of 1/4" steel plate with external liner of concrete between the tank and the ground. There are no cracks, pipes or drains or other means of material exit from the sump. Removal was through the use of a pump to a storage tank.

#5 None.

#6 None.

#7 There was no leachate collection system. Secondary containment is concrete to the primary steel tank.

#8 There were no certifications for the tank; it's integrity and condition was inspected weekly and without defects or failures.

#9 Insp records enclosed, the tank system was closed and the tank removed during the EPA inspection on 1 April 2006 hence no further inspections were conducted.

#10 No HW Inventories were recorded.

#11 All manifests, and shipping docs et al enclosed

#12 Statement of closure (out of service); no further closure documents exist.

FORM TUBE ALKALINE CLEANER TANK SYSTEM

#13 The Form Tube alkaline cleaner storage tanks were installed sometime in the fall of 1996. There were no modifications following construction.

#14 The tanks were first used shortly after the date referred to in response #13. See enclosed documents

#15 To correct the statement in the EPA request – the Form Tube Alkaline Cleaner Tank System did no steam cleaning, see the description as follows. The Uldyite tumble parts cleaning process used an alkaline cleaner. When spent, it was transferred to the storage above ground tanks. The above ground storage tanks were situated in a curbed secondary containment system, part of which included a pit that was used in connection with the cold water cleaning of oily parts. The pit was pumped out periodically and the contents managed as used oil. There are no documented releases from the alkaline cleaner above ground storage tanks into the secondary containment system. The material was removed from the above ground storage tanks on about a monthly basis, never exceeding 90 days. As mentioned above, the alkaline cleaner storage tanks were used from 1996 until shut down of the operation on or about February 2006 and the last off-site shipment of this material occurred on 21 April 2006. The cold water washing of oily parts operation was discontinued at the same time. The system was out of service at the time of inspection and the tanks removed shortly thereafter. It was not used during or after the EPA inspection on 1 April 2006.

#16 sump description, dimensions, see enclosed sketch.

#17 None.

#18 None.

#19 The in-ground pit was part of the secondary containment system for the alkaline cleaner above ground storage tanks. No additional secondary containment or leachate collection system was provided for the in-ground pit portion of that secondary containment system.

#20 There were no certifications for the tank; it's integrity and condition was inspected weekly and without defects or failures.

#21 Insp records enclosed, the tank system was shut down and all equipment and tanks removed from the site during April 2006. Hence no further inspections were conducted.

#22 No HW Inventories were recorded.

#23 Enclosed

#24 Statement of closure (out of service); no further closure documents exist.

CERTIFICATION

I certify that all information contained herein is true and complete to the best of my knowledge and belief.



John D Wagner
Director Environment Affairs

26 March 2007

Mueller Brass Company



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

OCT 25 2006

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REPLY TO THE ATTENTION OF:

DE-9J

John Wagner
Corporate Director of Environmental Affairs
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060

Re: Notice of Violation
Compliance Evaluation Inspection
MID005357504

Dear Mr. Wagner:

On March 30-31, 2006, representatives of the United States Environmental Protection Agency and Michigan Department of Environmental Quality inspected the Mueller Brass Company facility located in Port Huron, Michigan. The purpose of the inspection was to evaluate Mueller Brass Company's compliance with certain provisions of the Resource Conservation and Recovery Act (RCRA); specifically, those regulations related to the generation, treatment and storage of hazardous waste. This inspection was part of a Multimedia inspection of Mueller Brass. Please find enclosed a copy of the RCRA inspection report for your reference.

Based on information provided by Mueller Brass personnel, a review of records, and personal observations by the inspector while inspecting the facility, U.S. EPA finds that Mueller Brass is engaged in the management of hazardous waste without a hazardous waste construction permit or storage license and is in violation of certain requirements of the Natural Resources and Environmental Protection Act (NREPA), Michigan Administrative Rules (MAR), RCRA and the United States Code of Federal Regulations (CFR). Specifically, we find that Mueller Brass is in violation of the following requirements:

Violation 1. Operating Without a Construction Permit or Storage License. (Section 3005(a) of RCRA, 42 U.S.C. § 6925(a)).

NREPA 324.11118 Construction permit required. (1) Except as otherwise provided in section 11122, a person shall not establish a treatment, storage, or disposal facility without a construction permit from the department.

MAR 299.9502 Operating licenses; applicability and general application requirements. (1) Part 111 of the act requires an operating license for the treatment, storage, and disposal of any hazardous waste.

Mueller Brass was storing hazardous waste in its Steam Cleaning Tank system for more than 90 days without a construction permit or storage license during the time periods of September 19, 2003 through December 9, 2005; and December 10, 2005 through April 1, 2006.

Violation 2. Tank Integrity Assessment

MAR 299.9615 (1) Owners or operators who use tank systems to treat or store hazardous waste shall comply with all of the requirements of 40 C.F.R. Part 264, Subpart J.

40 CFR § 264.191(a). Assessment of existing tank system's integrity. (a) For each existing tank system that does not have secondary containment meeting the requirements of §264.193, the owner or operator must determine that the tank system is not leaking or is unfit for use. ... the owner or operator must obtain and keep on file at the facility a written assessment, reviewed and certified by a qualified Professional Engineer, in accordance with §270.11(d), that attests to the tank system's integrity.

40 CFR § 264.192 . Design and installation of new tank systems or components. (a) Owners or operators of new tank systems or components must obtain and submit to the Regional Administrator, at time of submittal of part B information, a written assessment, reviewed and certified by a qualified Professional Engineer, in accordance with §270.11(d), attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste.

Mueller Brass did not have a tank assessment that addressed the requirements of either 40 C.F.R. § 264.191 or 40 C.F.R. § 264.192 for the Steam Cleaning tank system.

Violation 3. Tank Secondary Containment

MAR 299.9615 (1) Owners or operators who use tank systems to treat or store hazardous waste shall comply with all of the requirements of 40 C.F.R. Part 264, Subpart J.

40CFR § 264.193. Containment and detection of releases.

(a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in paragraphs (f) and (g) of this section): (1) For all new and existing tank systems or components, prior to their being put into service.

(b) Secondary containment systems must be: (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(c) To meet the requirements of paragraph (b) of this section, secondary containment systems must be at a minimum: (3) Provided with a leak-detection system that is designed and

operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours.

Mueller Brass did not have secondary containment that met these requirements at the Steam Cleaning Tank system.

Violation 4. Tanks Daily Inspections

MAR 299.9615 (1) Owners or operators who use tank systems to treat or store hazardous waste shall comply with all of the requirements of 40 C.F.R. Part 264, Subpart J.

40 CFR § 264.195(c) The owner or operator must inspect at least once each operating day:

(1) Above ground portions of the tank system, if any, to detect corrosion or releases of waste.

(2) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

Mueller Brass was not performing daily inspections at its two hazardous waste tank systems, the Steam Cleaning tank system and the Formed Tube Alkaline Cleaner Tank, before March 23, 2006.

Violation 5. Tank System Requirements

MAR 299.9615(2) Owners or operators of tank systems that are not in compliance with the containment requirements of 40 C.F.R. §264.193(b) to (f) shall do all of the following until either the tank system is brought into compliance with the standards of 40 C.F.R. §264.193(a) or until a variance is obtained as provided by 40 C.F.R. §264.193(h):

.....
(b) For underground tank systems that are used for the treatment or storage of liquid hazardous wastes, or hazardous wastes that could generate free liquids, do all of the following:

(i) Provide adequate secondary containment and a leachate collection and withdrawal system to contain any release of hazardous wastes or hazardous waste constituents from the tank system.

(ii) Conduct a complete inventory of hazardous wastes in the tank system not less than twice a month.

(iii) Conduct leachate sampling and analysis at least once a year. If the inventories required pursuant to paragraph (ii) of this subdivision indicate a loss of waste, leachate sampling and analysis shall be performed within 24 hours of the discovery of the loss.

For the Steam Cleaning tank system, Mueller Brass did not have a secondary containment or leachate collection and withdrawal system; did not conduct a complete inventory of hazardous

waste in the tanks system twice a month; and did not conduct leachate sampling and analysis at least once a year at the underground sump managing steam cleaning hazardous waste.

Violation 6. Satellite Drum Not Marked

MAR 299.9306(2). A generator may, without a license issued pursuant to part 111 of the act and without complying with the provisions of subrule (1) of this rule, accumulate as much as 55 gallons of hazardous waste or 1 quart of an acute hazardous waste that is identified in table 203a, 204a, 204b, or 205a, or a severely toxic hazardous waste that is identified in table 202 in containers at or near any point of generation where wastes initially accumulate and which is under the control of the operator of the process that generates the waste if he or she complies with the provisions of 40 C.F.R. §§265.171, 265.172, and 265.173 and marks his or her containers with the hazardous waste number of the waste and the words "Hazardous Waste." A generator may substitute the chemical name for the hazardous waste number of the waste on his or her containers at or near the point of generation to comply with this subrule.

Mueller Brass had a satellite accumulation 55-gallon drum that was not marked "Hazardous Waste", the chemical name or the hazardous waste number. This regulation is condition for a storage license exemption. The violation was corrected during the inspection. No further action is required with respect to this violation.

Violation 7. Open Satellite Accumulation Containers

40 C.F.R. § 265.173 Management of containers. (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

Mueller Brass had two satellite 55-gallon drums that were open during the inspection. This regulation is referenced from MAR 299.9306(2) and is condition for a storage license exemption. The drums were closed during the inspection. No further action is required with respect to this violation.

Violation 8. Drums and Tanks Not Labeled or Marked Used Oil

MAR 299.9810(5).

40 CFR § 279.22 Used oil storage(c) Labels. (1) Containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words "Used Oil."

Mueller Brass had a 55-gallon drum and two tanks that were not labeled or marked used oil. The drum and tanks were labeled during the inspection. The drum and tanks were labeled during the inspection. No further action is necessary with respect to this violation.

Mueller Brass Company must immediately establish compliance with regulations cited above. Under Section 3008(a) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6928, U.S. EPA may issue an order assessing a civil penalty for any past or current violation and

requiring compliance immediately or within a specified time period. Although this letter is not such an order, we request that you submit a response in writing to this office no later than thirty (30) days after receipt of this letter documenting the actions, if any, which have been taken since the inspection to establish compliance with the above conditions and requirements.

You should submit your response to Michael Beedle, United States Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, DE-9J, Chicago, Illinois 60604. If you have any questions regarding this letter, please contact Mr. Beedle at (312) 353-7922.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Paul Little".

Paul Little, Chief
Compliance Section # 2
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division

Enclosure

cc:
John Craig, MDEQ, Waste & Hazardous Materials Division
Tom Sampson, MDEQ



Waste, Pesticides and Toxics Division

105-
mail on
10-25-06

Type of Document: Notice of Violation and Inspection Report/Checklist

Facility Name and Location: **Mueller Brass Company**
2199 Lapeer Avenue
Port Huron, Michigan 48060

U.S. EPA ID#: **MID005357504**

Assigned Staff: Michael Beedle

Phone: 3.7922

Name	Signature	Date
Author	Michael Beedle <i>MB</i>	10-19-06
Regional Counsel	<i>[Signature]</i>	10/19/06
Section Chief	<i>[Signature]</i>	10-23-06

Directions/Request for Clerical Support:

After the Section Chief signs this sheet and original letter:

1. Date stamp the cover letter;
 2. Make at least five copies of the contents of this folder for the:
 - assigned staff;
 - section file;
 - branch file;
 - ORC assigned staff; and
 - official file copy for the 7th floor that includes the original inspection report, and any additional copies for cc's or bcc's.
 4. Mail the original certified mail and distribute office copies and cc's and bcc's.
- Once the certified mail receipt is returned:
5. File the certified mail receipt (green card), with this sign-off sheet and the official file copy, and take to 7th floor RCRA file room.



JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:
WASTE MANAGEMENT DIVISION
SAGINAW BAY DISTRICT OFFICE
SUITE 1
503 N EUCLID AVE
BAY CITY MI 48706-2965

May 16, 2000

Mr. John Wagner
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060

Dear Mr. Wagner:

SUBJECT: March 31, 2000 Submittal – MID005357504

This correspondence is written to acknowledge receipt of your letter dated March 31, 2000. The letter itemizes actions taken by the Mueller Brass Company located at 2199 Lapeer Avenue, Port Huron, Michigan, to correct violations of Part 111, Hazardous Waste Management and Part 121, Liquid Industrial Waste, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); and Subtitle C of the federal Resource Conservation and Recovery Act of 1976, as amended (RCRA). These violations were observed by Department of Environmental Quality (DEQ), Waste Management Division staff during an inspection conducted on March 10, 2000, and the Mueller Brass Company was notified of these violations in a letter dated March 17, 2000.

Based on the information in Mueller Brass' letter, DEQ staff has determined that the Mueller Brass Company has corrected the violations identified.

However, this determination does not preclude nor limit the DEQ's ability to initiate other enforcement action, under state or federal law, as deemed appropriate.

If you have any questions, please contact me.

Sincerely,

Gene Suoppi
Environmental Quality Analyst
Waste Management Division
517-686-8025, Ext. 8204



JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY*"Better Service for a Better Environment"*

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RUSSELL J. HARDING, Director

REPLY TO:
WASTE MANAGEMENT DIVISION
SAGINAW BAY DISTRICT OFFICE
SUITE 1
503 N EUCLID AVE
BAY CITY MI 48706-2965

March 17, 2000

*3/31/00
Response*

Mr. Donald Insalaco
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060

Dear Mr. Insalaco:

SUBJECT: March 10, 2000 Inspection - MID005357504

On March 10, 2000, the Department of Environmental Quality (DEQ), Waste Management Division staff conducted an inspection of the Mueller Brass Company (Mueller Brass) located at 2199 Lapeer Avenue, Port Huron, Michigan. The purpose of the inspection was to evaluate the compliance of Mueller Brass with Part 111, Hazardous Waste Management (Part 111), and Part 121, Liquid Industrial Wastes (Part 121), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); Subtitle C of the Federal Resource Conservation and Recovery Act of 1976, as amended (RCRA referenced 40 CFR), and any administrative rules or regulations promulgated pursuant to these acts. A copy of the completed inspection form is enclosed.

As a result of the inspection, DEQ staff has determined that Mueller Brass is in violation of the following:

1. Part 111, Rule 306(2) & 40 CFR 262.34(c)(1)(ii) require that the container(s) being used to accumulate hazardous waste, at the point of generation, must have the words "Hazardous Waste" and the hazardous waste number clearly marked or labeled on it. Additionally, the total volume of container(s) being used to accumulate hazardous waste, at the point of generation, cannot exceed 55 gallons or one quart of acutely or severely toxic waste.

Mueller Brass has one satellite 1000-gallon caustic hazardous waste container that was not labeled with the waste code and one 0.5 cubic yard hazardous waste container in the wastewater treatment area that was not labeled with the words "Hazardous Waste" or the waste code. Mueller Brass' 1000 gallon container need not meet the 55-gallon satellite limit by instituting weekly inspections, staging spill control equipment in the area, and ensuring that the containment area has adequate secondary containment (ten percent of volume of containers or the volume of the largest container, whichever is greater). Please

March 17, 2000

submit photo documentation of the containers properly labeled. Additionally, submit weekly inspection documentation for the 1000-gallon caustic container and adequate secondary containment calculations.

RTC
w/ response

2. Part 111, Rule 306(1)(d) & 40 CFR 265.32(a),(b),(c),(d) require that the facility must have the following equipment:

- An internal communication or alarm system capable of providing immediate emergency instruction to facility personnel telephone(s) or 2-way radios at the scene of operations capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams.
- Portable fire extinguishers, fire control equipment, spill control equipment and decontamination equipment.
- Adequate volume and pressure of water and/or foam available for fire control.

RTC
w/ response

Spill control equipment is not staged adjacent to the wastewater treatment storage area or the caustic hazardous waste storage area, mentioned in violation 1. Please submit photo documentation of highly visible spill control equipment staged adjacent to the two hazardous waste storage areas.

- Part 121, Section 121.13(1) requires that liquid industrial waste (LIW) must be protected from weather, fire, physical damage and vandals. All vehicles, containers, and tanks used to hold LIW shall be closed or covered, except when necessary to add or remove waste, to prevent the escape of LIW. The exterior of all vehicles, containers, and tanks used to hold LIW shall be kept free of LIW and it's residue.

RTC
w/ response

Mueller Brass' LIW off-load station was stored in an open position, exposed to the weather, with releases to the outside of the container and adjacent concrete. Please submit photo documentation that the concrete and the outside of the container has been cleaned of LIW, the waste off-load station has been reengineered to prevent releases, and LIW is protected from the weather.

Please submit documentation to this office regarding those actions taken or to be taken to address the violations by April 14, 2000. The DEQ will evaluate the response, determine Mueller Brass' compliance status, and notify you of this determination.

This letter of warning does not preclude nor limit the DEQ's ability to initiate any other enforcement action, under state or federal law, as deemed appropriate.

Enclosed for your information, are the following handouts: Pollution Incident Prevention Plan Guidance, Understanding Hazardous Waste Regulations, Waste Minimization, Pollution Prevention, Secondary Containment, Spill Reporting Requirements, Materials Exchange, Mercury Concerns, Recycling Fluorescent Bulbs and Universal Waste.

March 17, 2000

Fully Regulated Generators and Small Quantity Generators of hazardous waste must comply with the Universal Waste regulations, or manage the applicable waste streams under the hazardous waste regulations, if the waste exhibits any hazardous waste characteristic.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "Gene Suoppi". The signature is fluid and cursive, with the first name "Gene" and last name "Suoppi" clearly distinguishable.

Gene Suoppi
Environmental Quality Analyst
Waste Management Division
517-686-8025, Ext. 8204

Enclosures

HAZARDOUS WASTE INSPECTION



Date: 3/10/00 ID#: MI0605 357 504
 Facility's Name: Mueller Brass Co.
 Facility Location Address: 1
 City: Pt Huron Zip: 48060 County Name: St. Clair

WASTE CODE	PROCESS WASTE IS GENERATED FROM
	Zinc Oxide
	Filter cake
	Waste oil
D008	Pads - Pb in Brass
0006, D008	AA&BAGS - BAG House Filters Cd & Pb Hg ⁺
D008	Pags

Reason for the Inspection: ☒ Routine ☐ Follow-up ☐ Complaint

PERSON(S) INTERVIEWED	TITLE	TELEPHONE NUMBER
John Wagner	Env. Mgr.	810-987-7770
Doug Westbrook	WW Specialist	
Don Insalaco	Casting mgr	
Don Scott	Chemist	

INSPECTOR(S) NAME	AGENCY	TELEPHONE NUMBER
Gene Suppi	DEQ	517 666 8025

Primary business of the facility: brass & metal machining for mins
scrap chips melt - casting - billets
extrusion - into brass rods - sales of brass
rods & forgings
used oil - sheet - Waste Coolants & H₂O soluble oil - analytical Fax

Does the facility discharge a process wastewater to the local POTW that would otherwise be a RCRA regulated hazardous waste? ☒ no ☐ yes
 (if yes send a copy of this cover sheet to SWQD)

Is the facility subject to air emission standards for process vents managing hazardous waste with organic concentrations of at least 10 ppmw? If yes, circle the type of operation(s): distillation fractionation thin-film evaporation solvent extraction air or stream stripping (if yes send a copy of this cover sheet to AQD)



STAFF REPORT

MICH. DEPT. OF ENVIRONMENTAL QUALITY
WASTE MANAGEMENT DIVISION

- ☐ Groundwater/Pt.31
☒ Hazardous Waste/Pt.111
☐ Solid Waste/Pt.115

- ☐ Liquid Ind.Waste/Pt.121
☐ Scrap tire/Pt.169
☐ Other _____

- ☐ Complaint Inspection
☒ Compliance Inspection
☐ Construction/Closure Inspection
☐ Permitting Inspection
☐ PEAS Investigation

- ☐ Sampling Inspection
☐ Telephone Call
☐ Meeting Notes
☐ Other _____

Facility/Site Name	Mueller Brass	Date/Time	3/10/00
Address		Facility/Site Number	17-20003 377304
Participants/Contacts		Staff	GS

REFERRED TO:

REMARKS:

021-L - Waste other oil } for analytical
019-L - Waste Coolants & H₂O Soluble oil }
D002 - NaOH - Consume WWTP - 500 gal 4500 kg LDR
D008 - Pb in Brass 1000's ± 1000's of # each mark LDR's attached
D006 - Cd in Brass

Manifest MI 774 2125 1-25-00 S008
changed to D008 on 3/10/00 GS by D Westbroke

Waste at off load station

85 gal - 75 gal

(lid left open w minor spills to cement
but precipitation goes to WWTP on site

Signature

Page ____ of ____

GENERATOR INSPECTION FORM

Facility's Name

Mueller Brass

Part 3 Rules

Date

3/10/00

ID#

MD 005 357 504

1994 151

HAZARDOUS WASTE AND WASTE #	SOURCE	HOW MUCH
D008	Lead in Brass - soap, soil, debris, baghouse filters	} 1000 kg mo
D006	Cadmium in Brass " " " "	
D002	Caustic NaOH - WWP	
019L	Waste Coolants & H2O Soluble oil	
021L	other waste oil - lubricating oil	

(rev. 08/26/99 - EAB)

abbreviated

FACILITY COMPLIANCE REQUIRED IN ALL AREAS

NI - Not Inspected N/A - Not Applicable

YES NO NI N/A

WASTE DETERMINATION (Rule 302: 40 CFR 262.11)

1. Determined if waste streams are hazardous waste? (Rule 302: 40 CFR 262.11)	GGR	<input checked="" type="checkbox"/>	NI N/A
a) Copy of waste evaluation on-site 3 years? (Rule 307(1): 40 CFR 262.40(c))	GRR	<input checked="" type="checkbox"/>	NI N/A
b) Re-evaluated waste when changes in materials or process? (Rule 302(3))	GGR	<input checked="" type="checkbox"/>	NI N/A

IDENTIFICATION NUMBER (Rule 303: 40 CFR 262.12)

2. Has the generator obtained an identification number? (Rule 303: 40 CFR 262.12)	GGR	<input checked="" type="checkbox"/>	NI N/A
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MANIFEST REQUIREMENTS (Rule 304: 40 CFR 262.20)

3. Copies of the manifest readily available for review & inspection (matched)? (Section 11138(1)(f))	GMR	<input checked="" type="checkbox"/>	NI N/A
4. Manifests kept for the past 3 years? (Rule 307(3): 40 CFR 262.40(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
5. Manifests, prepared by the generator (Rule 304(1)(a): 40 CFR 262.20(a)), contain the following?	GMR		NI N/A
a) Manifest document number. (Rule 304(2)(a): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
b) Generator's name, address, phone & ID # (Rule 304(2)(b): 40 CFR 262.20(a))	GMR	<input type="checkbox"/>	NI N/A
c) Name & ID # of the transporter. (Rule 304(2)(c): 40 CFR 262.20(a))	GMR	<input type="checkbox"/>	NI N/A
d) Name, address & ID # of TSDF. (Rule 304(2)(d): 40 CFR 262.20(b)&(c))	GMR	<input type="checkbox"/>	NI N/A
e) DOT description of waste(s). (Rule 304(2)(e): 40 CFR 262.20(a))	GMR	<input type="checkbox"/>	NI N/A
f) Quantity of waste, type & # of containers. (Rule 304(2)(f): 40 CFR 262.20(a))	GMR	<input type="checkbox"/>	NI N/A
g) Hazardous waste number of the wastes. (Rule 304(2)(g): 40 CFR 262.20(a))	GMR	<input type="checkbox"/>	NI N/A
h) Generator signature, initial transporter & date of acceptance? (Rule 304(4)(a)&(b): 40 CFR 262.23(a)(1)&(2))	GMR	<input type="checkbox"/>	NI N/A
6. Submitted copy of manifests to director no later than 10 days after month shipment was made? (Rule 304(4)(d))	GMR	<input type="checkbox"/>	NI N/A
7. Is the transporter used properly licensed under Act 451, Part 111? (Rule 304(1)(c))	GPT	<input checked="" type="checkbox"/>	NI N/A

NOTE: For shipments of hazardous waste solely by water or rail shipments, within United States see Rule 304(4)(f or g).

8. Using manifest that has expired? (Rule 304(2): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
9. Reportable exceptions. (Rule 308(3): 40 CFR 262.42)			
a) Number of manifests generator HASN'T receive signed copy from TSD w/in 35 days.	GRR		
b) Manifests generator HASN'T submitted exception reports to RA & DEQ after 45 days.	GRR		

		YES	NO	NI	N/A
10. Facility have written program to reduce volume/toxicity/recycle wastes? (Rule 304(2)(I):40 CFR 262.20(a))	GMR	<input type="checkbox"/>		NI	N/A

OR

11. Facility discuss program in place to reduce volume/toxicity/recycle of wastes? (Rule 304(2)(I): 40 CFR 262.20(a))	GMR	<input type="checkbox"/>		NI	N/A
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WASTE ANALYSIS AND RECORDKEEPING (40 CFR 268.7)

12. Did the generator determine if the waste is restricted from land disposal? (40 CFR 268.7(a))					
a) All listed wastes?	GLB	<input type="checkbox"/>		NI	N/A
b) All characteristic wastes?	GLB	<input checked="" type="checkbox"/>		NI	N/A

NOTE: If waste has both listed & characteristic waste codes, the treatment standard for the listed waste is sufficient if the treatment standards for the listed waste includes a standard for the constituent that caused the waste to exhibit the characteristic, except for D001 and D002. (40 CFR 268.9(b))

13. If restricted waste exceeds treatment standards or prohibitions did notice go w/ each shipment? (40 CFR 268.7(a)(1))	GLB	<input checked="" type="checkbox"/>		NI	N/A
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OR

14. If restricted waste does not exceed treatment standards or prohibitions did a notice and certification statement go with each shipment? (40 CFR 268.7(a)(2))	GLB	<input type="checkbox"/>		NI	N/A
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OR

15. If waste has exemption from prohibition on the type of land disposal method utilized for the waste, did a notice go with each shipment? (40 CFR 268.7(a)(3))	GLB	<input type="checkbox"/>		NI	N/A
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OR

16. If facility choose alternative treatment standard for lab pack that contains none of the waste in appendix IV, did a notice & certification go w/ each shipment? (40 CFR 268.7(a)(8))	GLB	<input type="checkbox"/>		NI	N/A
17. Did the notice include: (40 CFR 268.7(a)(1)(I-v) or 268.7(a)(2)(I)(A-D) or 268.7(a)(3)(I-iv)					
a) EPA hazardous waste #?	GLB	<input type="checkbox"/>		NI	N/A
b) If wastewater or non-wastewater as defined in 268.2(d&f)?	GLB	<input type="checkbox"/>		NI	N/A
c) Subcategory of the waste (such as D003 reactive cyanide) if applicable?	GLB	<input type="checkbox"/>		NI	N/A
d) Manifest number associated with the shipment?	GLB	<input type="checkbox"/>		NI	N/A
e) Waste analysis data, where available?	GLB	<input type="checkbox"/>		NI	N/A
f) Waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for F001 - F005, F039, D001, D002, D012-D043? (treatment standards for hazardous waste in table in 268.40 for the waste code under regulated constituents)	GLB	<input type="checkbox"/>		NI	N/A

UNLESS

g) Did generator/treater claim they are going to monitor for ALL regulated constituents in the waste in lieu of the generator indicating same in the notice? (40 CFR 268.7(a)(1)(ii))	GLB	<input type="checkbox"/>		NI	N/A
h) Underlying hazardous waste constituents (except vanadium and zinc), reasonably be expected to be present at the generation point, above UTS standards for D001, D002 & TCLP organics? (40 CFR 268 Subpart D & 268.48)	GLB	<input type="checkbox"/>		NI	N/A
18. Other than notices for waste exceeding treatment standards, did notices include:					
a) If the notice is for shipments that meet the standards does the notice include the certification?	GLB	<input type="checkbox"/>		NI	N/A
b) If the notice is for shipments under prohibitions does the notice include a statement that the waste isn't prohibited from land disposal & date the waste is subject to prohibition?	GLB	<input type="checkbox"/>		NI	N/A

YES NO NI N/A

NOTE: An alternate treatment standard may be used after approval from the Administrator. (40 CFR 268.44)

NOTE: Hazardous waste debris see 40 CFR 268.7(a)(1)(iv) for the notice requirements which must be followed by the statement "This hazardous debris is subject to alternative treatment standards of 40 CFR 268.45."

19. Generator retain on-site records to support determination from knowledge or results from tests? (40 CFR 268.7(a)(5))	GLB	<input checked="" type="checkbox"/>	NI	N/A
20. If the restricted waste is excluded from being a hazardous waste or solid waste did the generator place a on-time notice stating same in the facility file? (40 CFR 268.7(a)(6))	GLB	<input type="checkbox"/>	NI	N/A
21. All notices/certifications/demonstrations/other documents retained for 5 years on-site? (40 CFR 268.7(a)(7))	GLB	<input checked="" type="checkbox"/>	NI	N/A

NOTE: This requirement (268.7(a)(7)) applies to solid waste even when the hazardous waste characteristic is removed prior to disposal or when the waste is excluded from the definition of hazardous waste or solid waste.

DILUTION PROHIBITED AS SUBSTITUTE FOR TREATMENT (40 CFR 268.3)

22. Generator dilute hazardous waste or treatment residue of a hazardous waste to avoid prohibition? (40 CFR 268.3(a))	GLB	<input checked="" type="checkbox"/>	NI	N/A
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TREATMENT STANDARDS (40 CFR 268.40)

23. If wastes exceeding treatment standards are mixed, was the most stringent standards selected? (40 CFR 268.40(c))	GLB	<input type="checkbox"/>	NI	N/A
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BIENNIAL REPORT (Rule 308: 40 CFR 262.41)

24. Generator submitted biennial report by 3/1 (even years)? (Rule 308(1): 40 CFR 262.41)	GRR	<input checked="" type="checkbox"/>	NI	N/A
25. Were copies of the report retained at least 3 years? (Rule 307(4): 40 CFR 262.40(b))	GRR	<input checked="" type="checkbox"/>	NI	N/A

PRE-TRANSPORTER REQUIREMENTS (Rule 305: 40 CFR 262.30)

26. Waste packaged according to DOT regulations (required before shipping waste off-site)? (Rule 305(1)(a): 40 CFR 262.30))	GPT	co. said <input checked="" type="checkbox"/> observed <input checked="" type="checkbox"/>	NI	N/A
27. Are waste packages marked & labeled according to DOT concerning hazardous materials (required before shipping waste off-site)? (Rule 305(1)(b)(c): 40 CFR 262.32(a))	GPT	co. said <input checked="" type="checkbox"/> observed <input checked="" type="checkbox"/>	NI	N/A
28. On containers 110 gallons or less, is there a warning, generator's name, address, manifest document # & waste code; 49 CFR 172.304? (Rule 305(1)(d): 40 CFR 262.32(b))	GPT	co. said <input checked="" type="checkbox"/> observed <input checked="" type="checkbox"/>	NI	N/A
29. If required, are placards available to the transporter? (Rule 305(1)(e): 40 CFR 262.33)	GPT	<input checked="" type="checkbox"/>	NI	N/A

ACCUMULATION TIME (Rule 306: 40 CFR 262.34)

30. If hazardous waste accumulated in containers: (If no, skip to #35)				
a) Containers have accumulation date & visible? (Rule 306(1)(b): 40 CFR 262.34(a)(2))	GPT	<input checked="" type="checkbox"/>	NI	N/A
b) Container have words "Hazardous Waste"? (Rule 306(1)(c): 40 CFR 262.34(a)(3))	GPT	<input checked="" type="checkbox"/>	NI	N/A
c) Is each container clearly marked with the hazardous waste number? (Rule 306(1)(b))	GPT	<input checked="" type="checkbox"/>	NI	N/A
d) Has more than 90 days elapsed since date marked? (Rule 306(1))	GPT	<input checked="" type="checkbox"/>	NI	N/A

UNLESS

e) The generator applied for & received an extension to accumulate longer? (Rule 306(3): 40 CFR 262.34(b))	GPT	<input type="checkbox"/>	NI	N/A
--	-----	--------------------------	----	-----

The following Subpart I, 265.170 to 265.177 requirements are referred to by Rule 306(1)(a) and 40 CFR 262.34(a)(1).

f) Are containers in good condition? (265.171)	GMC	<input checked="" type="checkbox"/>	NI	N/A
g) Are containers compatible with waste in them (265.172)	GMC	<input checked="" type="checkbox"/>	NI	N/A
h) Are containers stored closed? (265.173(a))	GMC	<input checked="" type="checkbox"/>	NI	N/A

		YES	NO	NI	N/A
i) Containers handled/stored in a way which may rupture it or cause leaks? (265.173(b))	GMC	<input checked="" type="checkbox"/>		NI	N/A
j) Ignitable & reactive wastes stored 15 meters (50 feet) from property line? (265.176)	GMC	<input checked="" type="checkbox"/>		NI	N/A
k) Are containers inspected weekly for leaks and defects? (265.174)	GMC	<input checked="" type="checkbox"/>		NI	N/A
l) Did the generator document the inspections in 30(k)? (Rule 306(1)(a)(I))	GMC	<input checked="" type="checkbox"/>		NI	N/A
m) Inspection documents maintained on-site 3 years? (Rule 306(1)(a)(I))	GMC	<input checked="" type="checkbox"/>		NI	N/A
n) Are incompatible wastes stored in separate containers? (265.177(a))	GMC	<input checked="" type="checkbox"/>		NI	N/A
o) Hazardous wastes put in unwashed containers that previously held incompatible waste. (265.177(b))	GMC	<input type="checkbox"/>		NI	N/A
p) Incompatible waste separated/protected from each other by physical barriers or sufficient distance? (265.177(c))	GMC	<input type="checkbox"/>		NI	N/A
31. If hazardous waste is being accumulated at the point of generation:					
a) Container(s) < 55 gal or 1 qt acutely/severely toxic? (Rule 306(2): 40 CFR 262.34(c)(1))	GMC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NI	N/A
b) Container(s) under operator control & near the point of generation? (Rule 306(2): 40 CFR 262.34(c)(1))	GMC	<input checked="" type="checkbox"/>		NI	N/A
c) Container(s) have words "Hazardous Waste"? (Rule 306(2): 40 CFR 262.34(c)(1)(ii))	GMC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NI	N/A
d) Are the container(s) marked with the hazardous waste number? (Rule 306(2))	GMC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NI	N/A

Rule 306(2) & 40 CFR 262.34(c)(1)(I) both refer to 40 CFR 265.171, 265.172 & 265.173(a).

e) Are container(s) in good condition? (265.171)	GMC	<input checked="" type="checkbox"/>		NI	N/A
f) Are container(s) compatible with waste in them? (265.172)	GMC	<input checked="" type="checkbox"/>		NI	N/A
g) Container(s) closed when not in use & managed to prevent leaks? (265.173(a))	GMC	<input checked="" type="checkbox"/>		NI	N/A
32. If generator exceeded 55 gallons or 1 quart, w/in 3 days did generator, w/respect to that amount of excess waste: (Rule 306(2): 40 CFR 262.34(c)(2))					
a) Mark the container with the date the excess amount began accumulating?	GMC	<input type="checkbox"/>		NI	N/A
b) Move to an area with secondary containment?	GMC	<input checked="" type="checkbox"/>		NI	N/A

Rule 306(1)(a) refers to containment requirements in 40 CFR 264.175.

33. If accumulating free liquids or any F020, F021, F022, F023, F026, F027, does the hazardous waste storage area include:					
a) Impervious base free of cracks? (264.175(b)(1))	GMC	<input checked="" type="checkbox"/>		NI	N/A
b) Sloped or otherwise designed to elevate/protect containers from contact with liquids? (264.175(b)(2))	GMC	<input checked="" type="checkbox"/>		NI	N/A
c) Hold 10% of volume of containers or volume of the largest container, whichever is greater? (264.175(b)(3))	GMC	<input checked="" type="checkbox"/>		NI	N/A
d) Run-on prevented unless sufficient capacity? (264.175(b)(4))	GMC	<input checked="" type="checkbox"/>		NI	N/A
e) Accumulated liquids removed in a timely manner to prevent overflow? (264.175(b)(5))	GMC	<input checked="" type="checkbox"/>		NI	N/A
34. If accumulating solids (other than F020, F021, F022, F023, F026, F027), is hazardous waste accumulation area sloped or otherwise designed, or containers elevated or otherwise protected from contact with liquids? (264.175(c))	GMC	<input checked="" type="checkbox"/>		NI	N/A

Closure of accumulation area(s) is under question 50.

35. Is hazardous waste accumulated in other than tanks or containers? Or, is hazardous waste generated but not accumulated, i.e.: process tank? Explain any yes answer.				NI	N/A
36. Waste area protected from weather, fire, physical damage & vandals? (Rule 306(1)(e))	GMC	<input checked="" type="checkbox"/>		NI	N/A
37. Hazardous waste accumulated so no hazardous waste or hazardous waste constituent can escape by gravity into soil, directly or indirectly, into surface, groundwaters, drains or sewers, and such that fugitive emissions do not violate Act 451, Part 55? (Rule 306(1)(f))	GMC	<input checked="" type="checkbox"/>		NI	N/A
38. Is hazardous waste accumulated in tanks? If so, complete Tank System inspection form.				NI	N/A
39. Hazardous waste placed on drip pads? If so, complete Wood Preserving inspection form.				NI	N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refers to 265.16

PERSONNEL TRAINING (265.16)

40. Did personnel receive training? (265.16)		<input checked="" type="checkbox"/> NI N/A
Do personnel training records contain the following:		
a) Job title? (265.16(d)(1))	GPT	<input checked="" type="checkbox"/> NI N/A
b) Job descriptions? (265.16(d)(2))	GPT	<input checked="" type="checkbox"/> NI N/A
c) Name of employee filling each job? (265.16(d)(1))	GPT	<input checked="" type="checkbox"/> NI N/A
d) Description of type & amount of both introductory & continued training? 265.16(d)(3))	GPT	<input checked="" type="checkbox"/> NI N/A
e) Training designed so facility personnel can respond to emergencies? (265.16(a)(3))	GPT	<input checked="" type="checkbox"/> NI N/A
f) Records of training? (265.16(d)(4))	GPT	<input checked="" type="checkbox"/> NI N/A
g) Do new personnel receive required training within 6 months? (265.16(b))	GPT	<input checked="" type="checkbox"/> NI N/A
h) Do training records show personnel have taken part in annual training? (265.16(c))	GPT	<input checked="" type="checkbox"/> NI N/A
i) Training by person trained in haz. waste management procedures? (265.16(a)(2))	GPT	<input checked="" type="checkbox"/> NI N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refer to 265, Subpart C, 265.30-265.37.

PREPAREDNESS AND PREVENTION (265.30-265.37)

41. Facility maintained/operated to minimize possibility of fire, explosion, release of hazardous waste or hazardous waste constituent which could threaten human health/environment? (265.31)	GPT	co. said <input checked="" type="checkbox"/> observed <input checked="" type="checkbox"/> NI N/A
42. If required, does this facility have the following equipment:		
a) Internal communications or alarm systems? (265.32(a))	GPT	<input checked="" type="checkbox"/> NI N/A
b) Telephone or 2-way radios at the scene of operations? (265.32(b))	GPT	<input checked="" type="checkbox"/> NI N/A
c) Portable fire extinguishers, fire control, <u>spill control equipment</u> and decontamination equipment? (265.32(c))	GPT	<input checked="" type="checkbox"/> NI N/A
d) Adequate volume of water and/or foam available for fire control? (265.32(d))	GPT	<input checked="" type="checkbox"/> NI N/A
43. Testing and Maintenance of Emergency Equipment:		
a) Owner/operator test & maintain emergency equipment to assure operation? (265.33)	GPT	<input checked="" type="checkbox"/> NI N/A

NOTE: Access to communication or alarm system is applicable only if required 40 CFR 265.32

b) Has owner/operator provided immediate access to internal alarms? (265.34(a&b))		
i) When hazardous waste is being poured, mixed, etc.	GPT	<input type="checkbox"/> NI N/A
ii) One employee on the premises while facility is operating.	GPT	<input type="checkbox"/> NI N/A
c) Aisle space for unobstructed movement of personnel/emergency equipment? (265.35)	GPT	<input checked="" type="checkbox"/> NI N/A
44. Has the facility made arrangements with local authorities? (265.37(a)&(b))	GPT	<input checked="" type="checkbox"/> NI N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refer to Subpart D, 265.50-265.56.

CONTINGENCY PLAN AND EMERGENCY PROCEDURES (265.50-265.56)

45. Plan implemented whenever fire/explosion/release could threaten human health or the environment? (265.51(b))	GPT	<input checked="" type="checkbox"/> NI N/A
46. Does the contingency plan contain the following:		
a) Actions personnel must take responding to fires/explosions/unplanned release of hazardous waste? (265.52(a&b))	GPT	<input checked="" type="checkbox"/> NI N/A
b) Describe arrangements or attempts w/ local police, fire, hospitals, contractors, state & local emergency responders for emergency services; (265.52(c)) & (265.37(a)&(b))?	GPT	<input checked="" type="checkbox"/> NI N/A
c) Name, addresses & phone (office & home) of emergency coordinator? (265.52(d))	GPT	<input checked="" type="checkbox"/> NI N/A

		YES	NO	NI	N/A
d) List emergency equipment at the facility, including location, physical description & capabilities? (265.52(e))	GPT	<input checked="" type="checkbox"/>		NI	N/A
e) Evacuation plan for personnel w/ signal(s), evacuation routes & alternate evacuation routes. (265.52(f))	GPT	<input checked="" type="checkbox"/>		NI	N/A
47. Does the facility have an Emergency Coordinator?		<input type="checkbox"/>		NI	N/A
Emergency Coordinator and Emergency Procedures:					
a) Emergency coordinator familiar with site operation & emergency procedures? (265.55)	GPT	<input checked="" type="checkbox"/>		NI	N/A
b) Emergency coordinator have authority to carry out the contingency plan? (265.55)	GPT	<input checked="" type="checkbox"/>		NI	N/A
c) If emergency occurred, did the emergency coordinator followed emergency procedures? (265.56)	GPT	<input checked="" type="checkbox"/>		NI	N/A
d) Fire/explosion/other release of hazardous waste/haz. waste constituents, could threaten human health or environment or generator has knowledge spill reached surface or ground water, did generator notify MDEQ? (Rule 306(1)(d))	GPT	<input checked="" type="checkbox"/>		NI	N/A
48. Contingency plan Amendments and Copies:					
a) Amended: fails in emergency; changes in regulations/emergency coordinators/emergency equipment? (265.54)	GPT	<input type="checkbox"/>		NI	N/A
b) Copies of plan on site and sent to local emergency organizations? (265.53)	GPT	<input checked="" type="checkbox"/>		NI	N/A

Rule 309 refers to 262, Subpart E except 262.54 & 262.55

INTERNATIONAL SHIPMENTS (Rule 309 & 310: 40 CFR 262.50-262.60)

49. Has the facility imported or exported hazardous waste?	GOR			NI	N/A
a) Exporting, has the generator:	GOR			NI	N/A
i) Notified the Administrator in writing? (262.52(a))	GOR	<input type="checkbox"/>		NI	N/A
ii) Receiving country consented to accept waste. (262.52(b))	GOR	<input type="checkbox"/>		NI	N/A
iii) Has copy of EPA Acknowledgment of Consent. (262.52(c))	GOR	<input type="checkbox"/>		NI	N/A
iv) Compiled with manifest requirements Rule in 309(2)(a-i).	GOR	<input type="checkbox"/>		NI	N/A
v) If required, was an exception report filled. (309(3)(a-c))	GOR	<input type="checkbox"/>		NI	N/A
b) Importing, has the generator met manifest requirements? (Rule 310: 40 CFR 262.60)	GOR	<input type="checkbox"/>		NI	N/A

Rule 306(1)(g) and 40 CFR 262.34(a)(1) refers to 40 CFR 265.111 & 265.114.

ACCUMULATION AREA CLOSURE (265.111 & 265.114)

50. The accumulation area must be closed in a manner that: (265.111 & 265.114)					
a) Minimizes need for further maintenance.	GMC	<input type="checkbox"/>		NI	N/A
b) Controls/minimizes/eliminates, to protect human health & environment, the escape of haz. waste or haz. waste constituents, leachate, run-off to ground/surface waters and air.	GMC	<input type="checkbox"/>		NI	N/A
c) All contaminated equipment, structures, and soil properly disposed of.	GMC	<input type="checkbox"/>		NI	N/A

Comments:

- 1) 1- 1000 gal NaOH container needs waste code, spill control equipment & secondary containment calculations & weekly inspections
- 2) 1- 1/2 yd³ WWT solids needs labeling & WWT needs spill control equipment
- 3) waste oil off-load station container/tank stored open with spills to the concrete & outside of container - off load lid needs to be reengineered to keep container closed when not off-loading waste oil

INDUSTRIAL PRODUCTS DIVISION

March 31, 2000



Mr. Gene Suoppi
Environmental Quality Analyst
Waste Management Division
Department of Environmental Quality
503 North Euclid Avenue
Bay City, Michigan 48706

RE: Your letter of 17, March 2000 (Hazardous Waste Management, Liquid Industrial Waste, and Resource Conservation and Recovery Act (RCRA) Inspection).

Dear Mr. Suoppi,

Regarding your letter dated March 17, 2000 concerning issues noted during your March 10, 2000 inspection; Mueller Brass Company submits the following for your review.

- Item 1. Action Taken The 1,000-gallon tank has been labeled. See Attachment #1.
The 1,000-gallon tank is inspected weekly. See attachment #2
The secondary containment area has been calculated. See attachment #3
The .5 cubic yard container has been labeled. See attachment #4
- Item 2. Action Taken Spill kits are now located in wastewater treatment (see attachment #5), and in the caustic hazardous waste storage area (See attachment #6).
- Item 3. Action Taken Loading station area was cleaned and re-engineered to prevent releases and exposure to weather. (See attachment #7).

We look forward to you evaluation and response of our actions taken. Should you require additional information, please contact me at (810) 987-7770

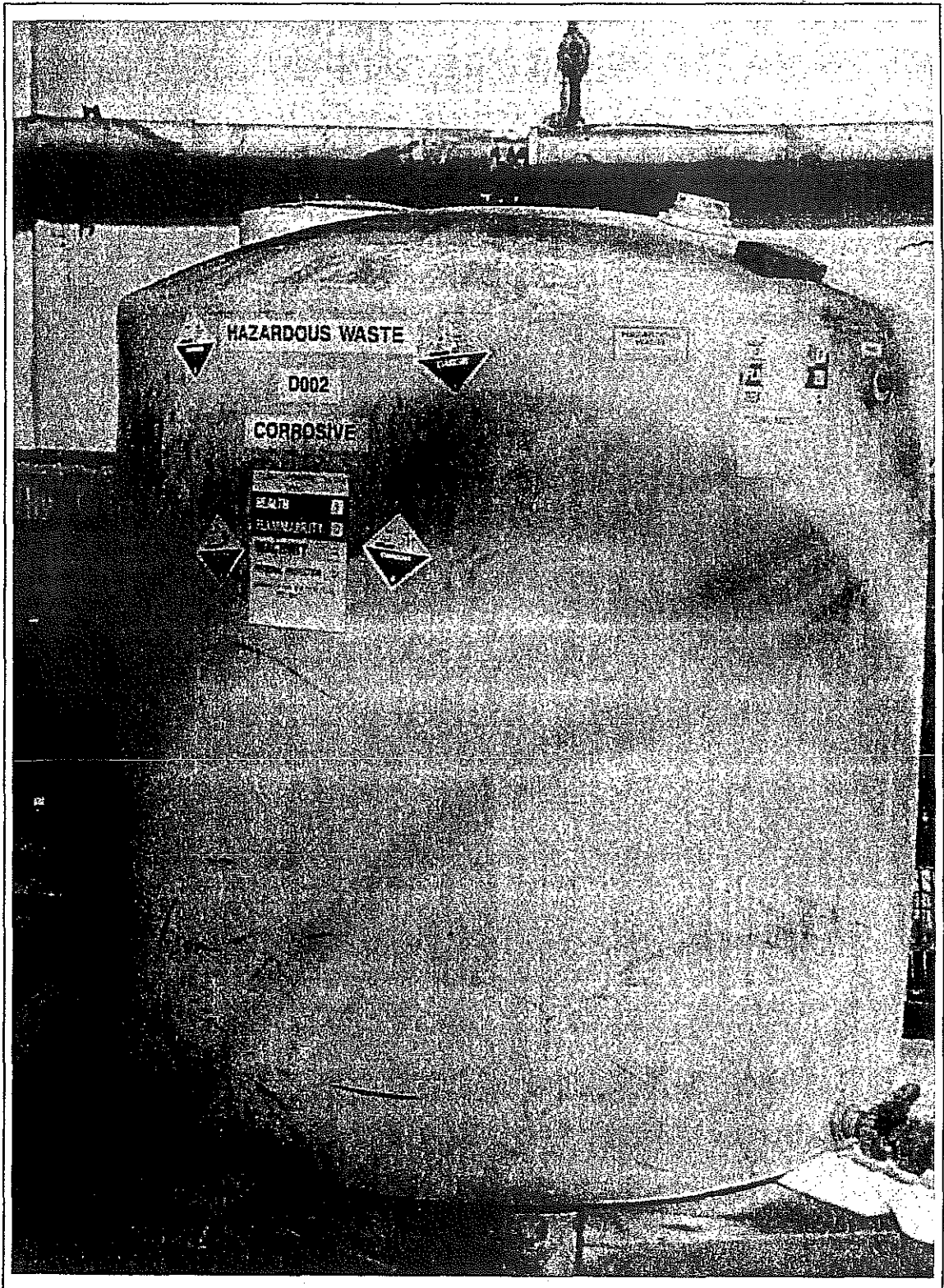
Sincerely,

Doug Westbrook
MUELLER BRASS CO.

Enclosure

pc: Don Insalaco
John Wagner
File

ATTACHMENT 1

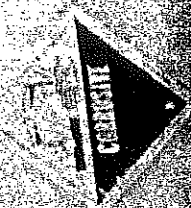
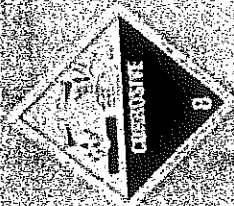


ATTACHMENT 1

HAZARDOUS WASTE

D002

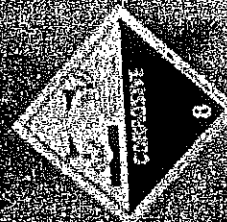
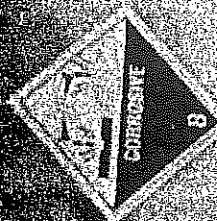
CORROSIVE



SODIUM HYDROXIDE SOLUTION
D002

HEALTH	3
FLAMMABILITY	0
REACTIVITY	2
PERSONAL PROTECTION	D

Corrosive to metals, irritant to skin and eyes.
H290, H314, H332, H334, H410
P273, P301+P312, P302+P352, P303+P361+P531, P305+P351+P338, P330, P331+P332+P333, P332+P313, P333+P313, P334, P340, P341, P360+P353, P370+P378, P501



ATTACHMENT 2

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-13-00</u>	INSPECTOR: <u>Daniel B. [Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA: FORMED TUBE

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	<input checked="" type="radio"/> Y N	SLIGHT LEAK (CONTAINED) NEAR TOP OF TANK	NOTIFIED FOREMAN. REPAIRED
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-20-00</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

TANK AREA: FORMED TUBE

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N	WASTE WAS MANIFESTED OFF-SITE.	NOTIFIED FOREMAN TO REPAIR FITTING NEAR TOP OF TANK. REPAIRED 3-21-00
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

FORMED TUBE ALKALINE CLEANER TANK

WEEKLY INSPECTION CHECKLIST

DATE: <u>3-27-00</u>	INSPECTOR: <u>[Signature]</u>	HAZARDOUS CODE: <u>D002</u>
ITEM	SYMBOL	COMMENTS
		ACTION TAKEN

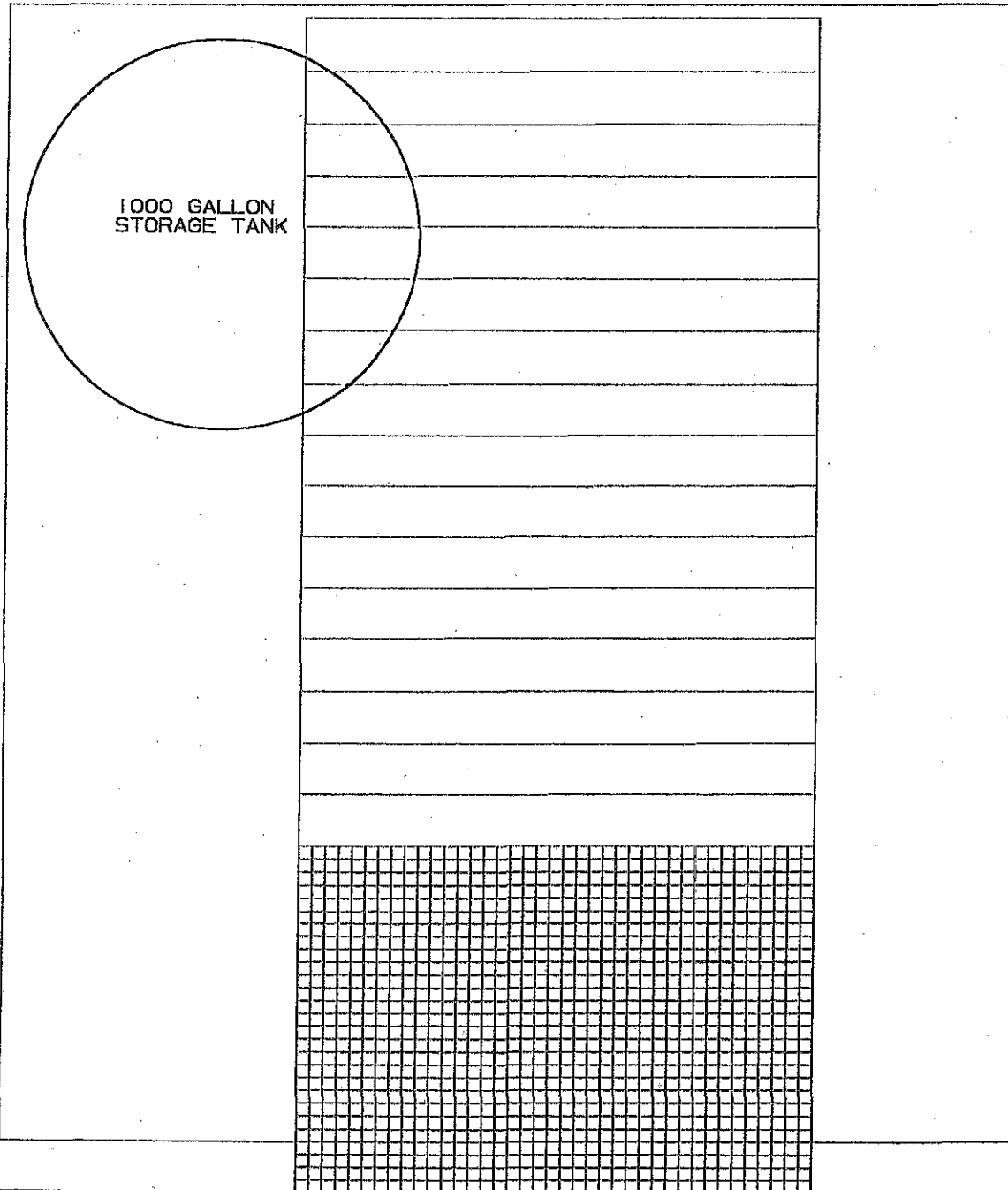
TANK AREA: FORMED TUBE

LEAKS:	Y <input checked="" type="radio"/> N		
LEAKS FROM PIPES:	Y <input checked="" type="radio"/> N		
CONDITION OF OUTLET PIPING:	<input checked="" type="radio"/> S U		
VALVES CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		
DRAW OFFS CLOSED WHEN NOT IN USE:	<input checked="" type="radio"/> Y N		

SYMBOLS: Y = YES
N = NO

S = SATISFACTORY
U = UNSATISFACTORY

ATTACHMENT 3



FORMED TUBE
SECONDARY CONTAINMENT

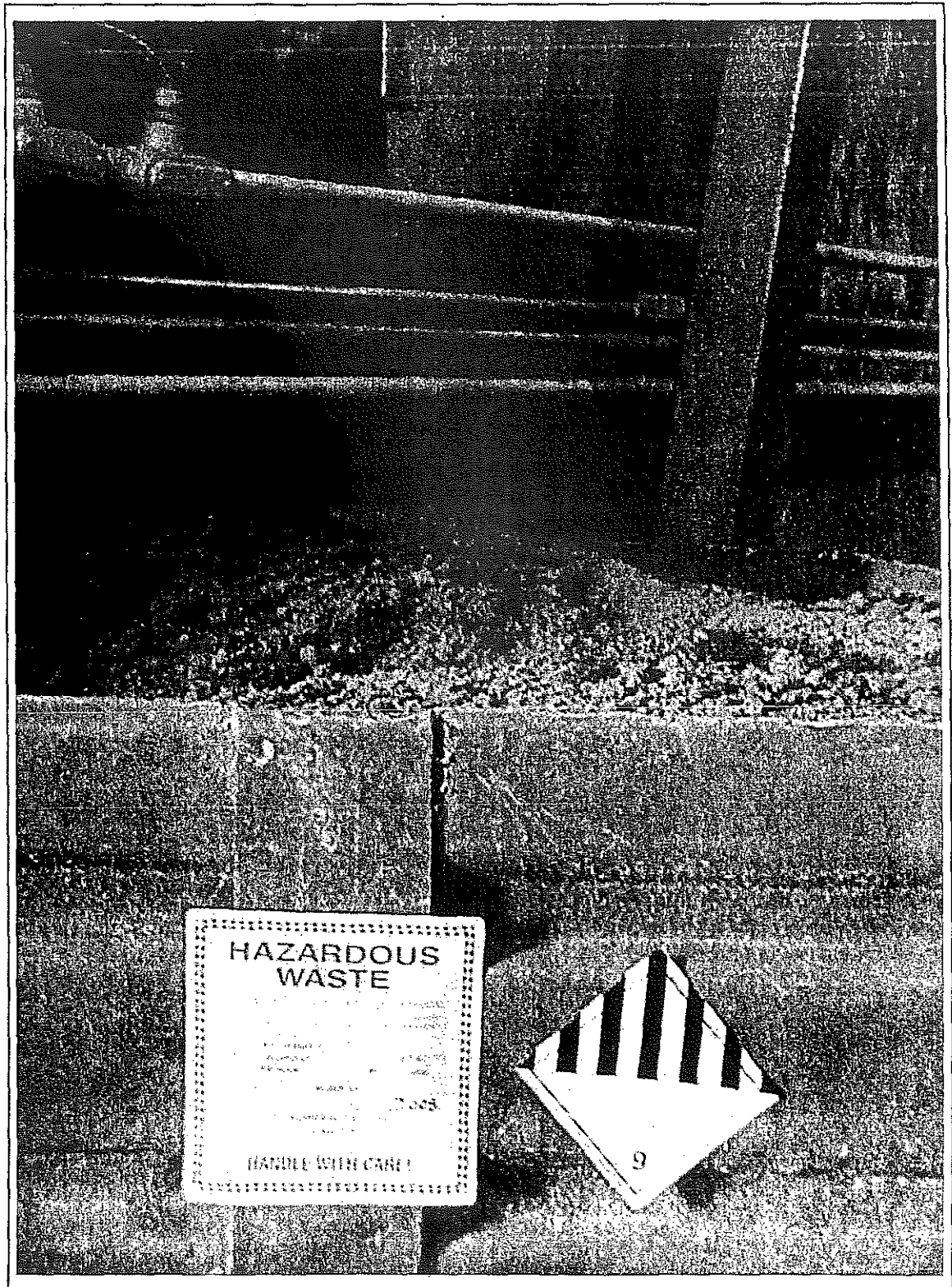
BLUE PIT AREA
128"x78"x8" DEEP
VOLUME 79872 cu. in. (345.8 GAL)

RED PIT AREA
54"x78"x46" DEEP
VOLUME 193752 cu. in. (838.8 GAL)

GREEN BARRIER AREA
176"x154"x5.5" HIGH
VOLUME 149072 cu. in. (645.3 GAL)

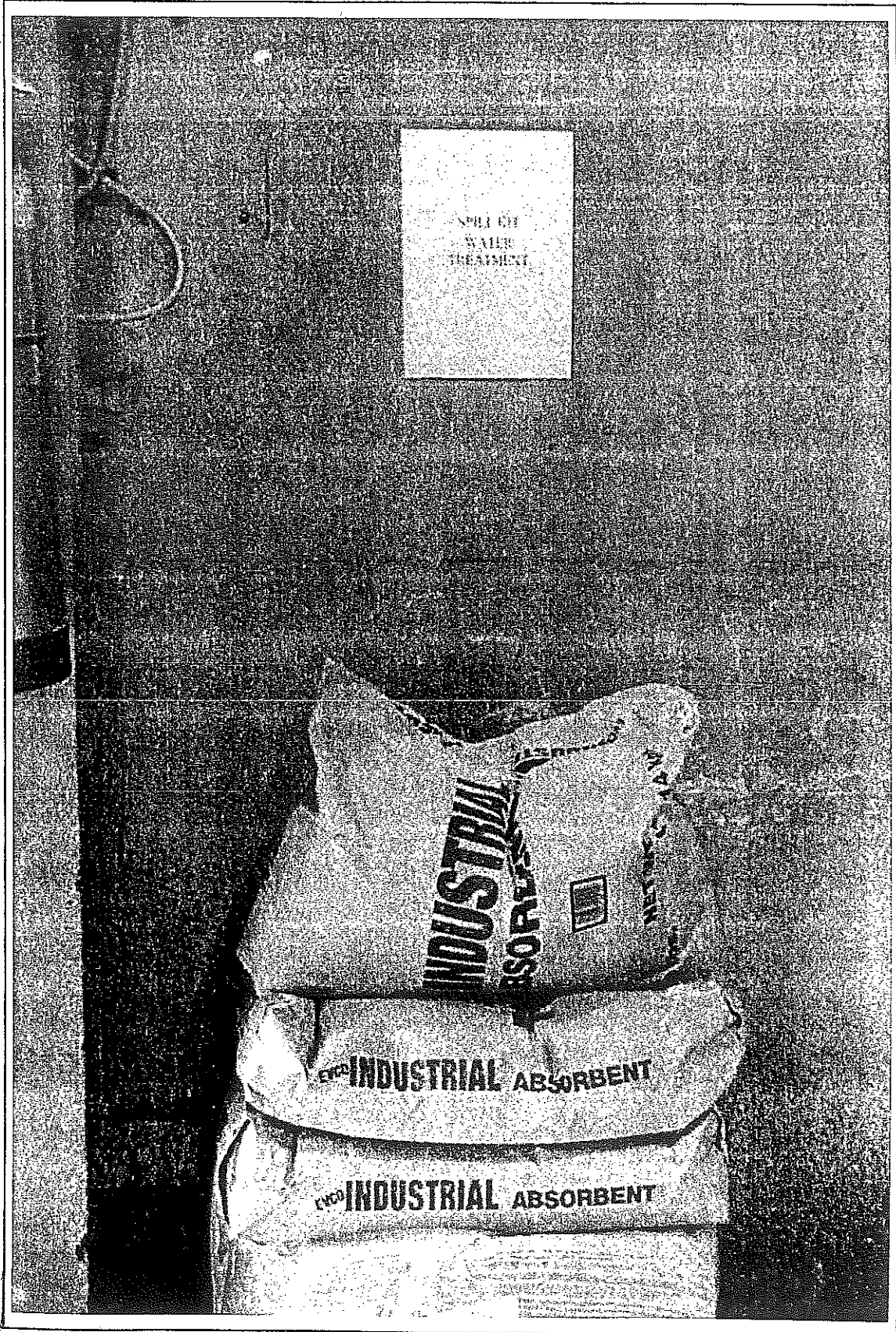
TOTAL 1184.6 GAL

ATTACHMENT 4



WATER TREATMENT

ATTACHMENT 5
(3 Bags oil dry)
(1 Bag absorbent pads)

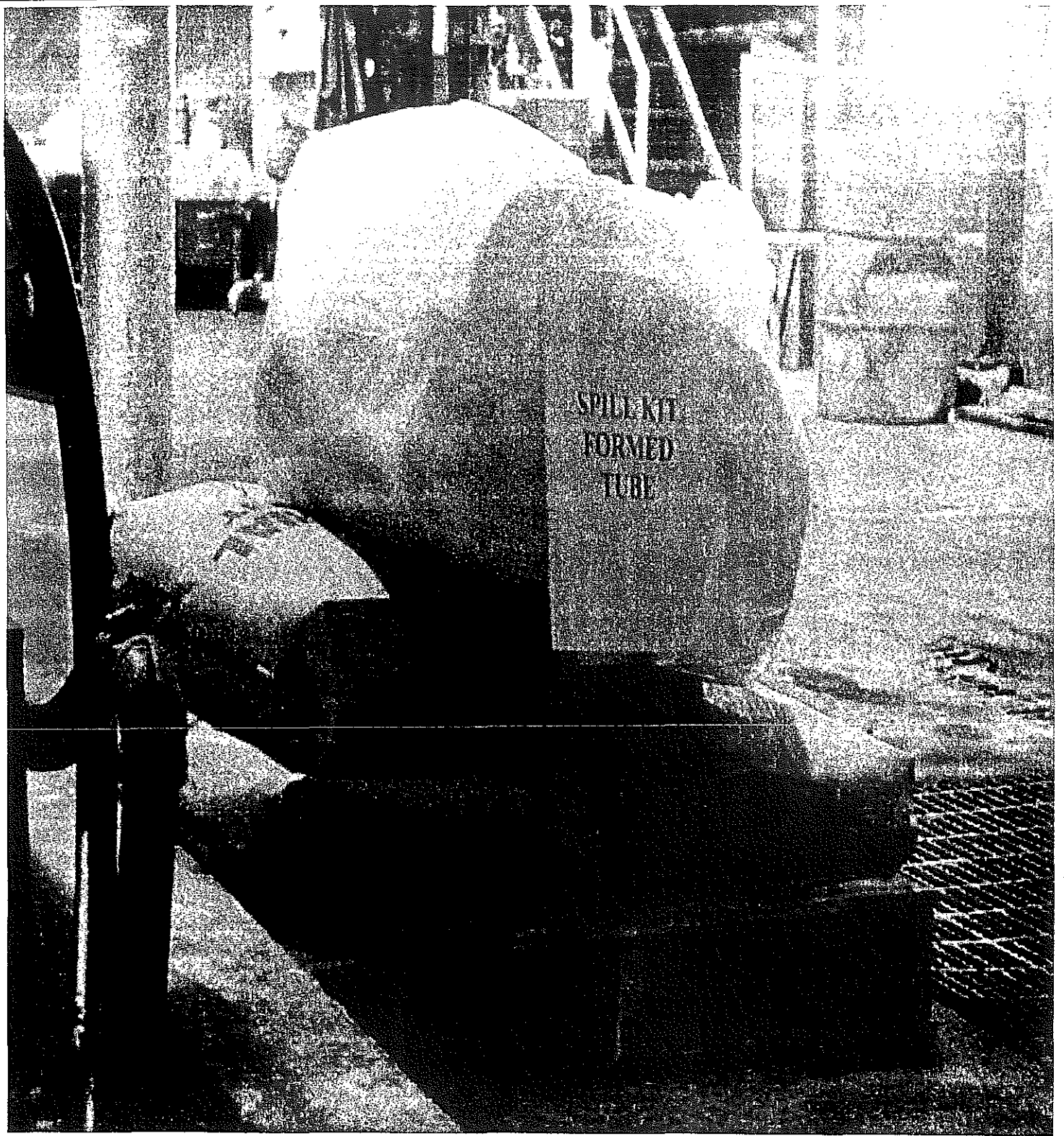


FORMED TUBE

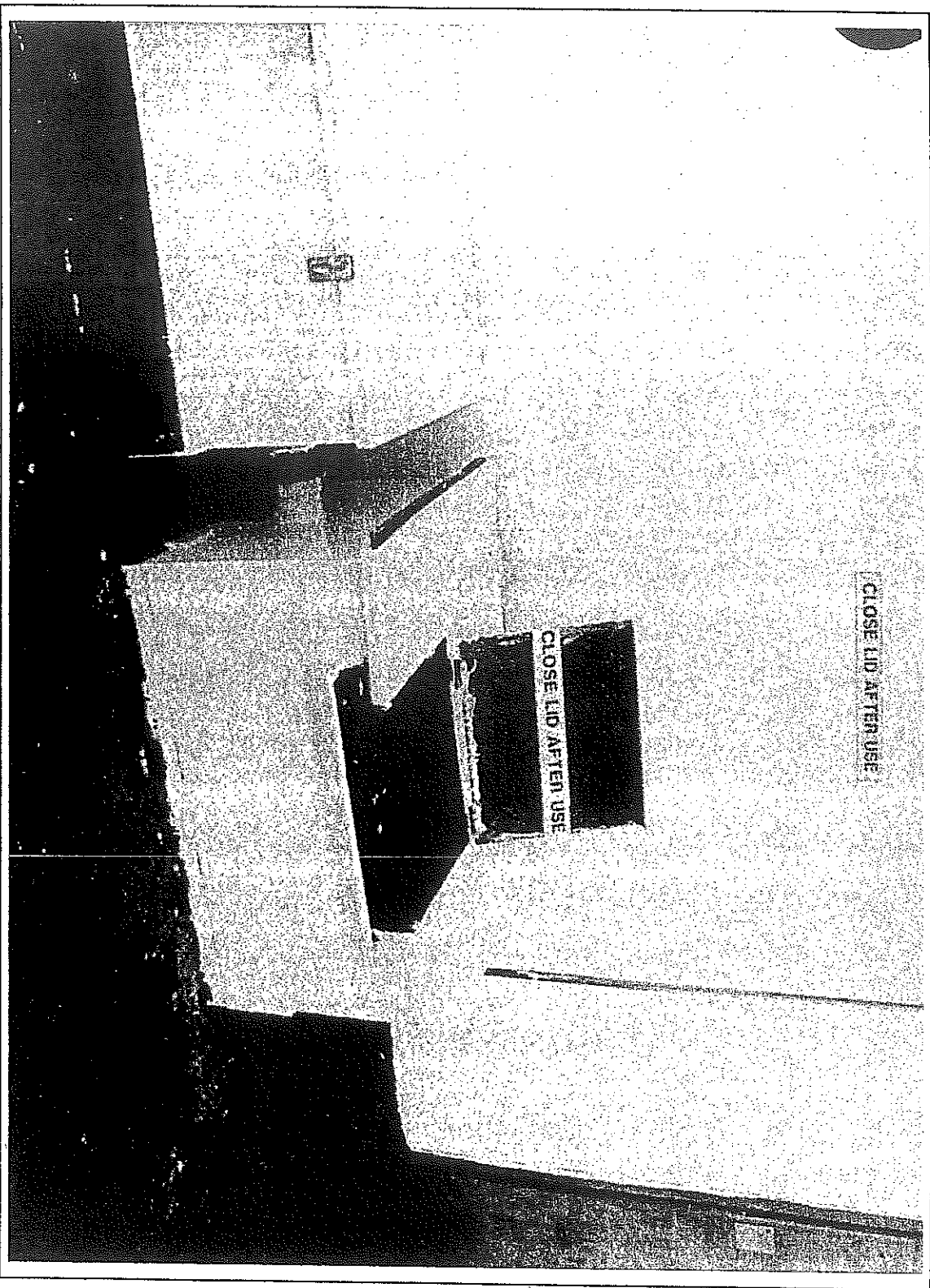
ATTACHMENT 46

(3 Bags oil dry)

(1 Bag absorbent pads)



ATTACHMENT 7





JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



STEVEN E. CHESTER
DIRECTOR

August 13, 2003

Mr. John Wagner
Mueller Brass Company
2199 Lapeer Avenue
Port Huron, Michigan 48060

Dear Mr. Anderson:

SUBJECT: Facility Inspection – MID 005 357 504

On July 30, 2003, staff of the Department of Environmental Quality (DEQ) conducted an inspection of Mueller Brass Company, located in Port Huron, Michigan. The purpose of the inspection was to evaluate compliance of the facility with Part 111, Hazardous Waste Management and Part 121, Liquid Industrial Waste, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); Subtitle C of the Federal Resource Conservation and Recovery Act of 1976, as amended (RCRA), and any administrative rules or regulations promulgated pursuant to these acts. A copy of the completed inspection form is enclosed per your request at the time of the inspection.

Based upon information obtained and observations made during the inspection, DEQ staff has determined that the facility is in compliance with the requirements that were evaluated.

If you have any questions, please contact me.

Sincerely,

Trisha Peters
Environmental Quality Analyst
Waste and Hazardous Materials Division
989-686-8025, Ext. 8204

tp:red

Enclosure

HAZARDOUS WASTE INSPECTION

DATE: 7/30/03 GEN. I.D.# MID 005 357 504
 FACILITY'S NAME Mueller Brass Company
 FACILITY LOCATION ADDRESS 2199 Lapeer Ave
 CITY Port Huron ZIP: 48060 COUNTY St Clair

WASTE CODE	PROCESS WASTE IS GENERATED FROM

Reason for Inspection: ☒ Routine ☐ Follow-Up ☐ Complaint

PERSON(S) INTERVIEWED	TITLE	TELEPHONE NUMBER
<u>John Wagner</u>	<u>Dir of Env. Affairs</u>	
<u>Don</u>		

INSPECTOR'S NAME	AGENCY	TELEPHONE NUMBER
<u>Trisha Peters</u>	<u>Dept. of Environmental Quality</u>	<u>989-686-8025</u> <u>ext. 8204</u>

Primary business of facility: Brass Mfg.

Does the facility discharge a process wastewater to the local POTW that would otherwise be a RCRA regulated waste? ☐ no ☐ yes (If yes, send copy of this cover sheet to SWQD).

Is the facility subject to air emission standards for process vents managing hazardous waste with organic concentrations of at least 10 ppmw? If yes, indicate the type of operation(s): ☐ DISTILLATION ☐ FRACTIONATION ☐ THIN-FILM EVAPORATION ☐ SOLVENT EXTRACTION ☐ AIR OR STREAM STRIPPING (If yes, send a copy of this cover sheet to AQD).

GENERATOR INSPECTION FORM

Rev. 4/2002

Facility's Name Mueller Brass Company

Part 3 Rules

Date 7/30/03 ID# MID 005 357 504

1994 PA 451

HAZARDOUS WASTE AND WASTE #	SOURCE	HOW MUCH
D008	lead in Brass	71000kg/Mo
D006	cd in Brass	
D002		
D001		

___ abbreviated

FACILITY COMPLIANCE REQUIRED IN ALL AREAS

NI - Not Inspected N/A - Not Applicable)

WASTE DETERMINATION (Rule 302: 40 CFR 262.11)

		YES	NO
1. Determined if waste streams are hazardous waste? (Rule 302: 40 CFR 262.11)	GGR	<input checked="" type="checkbox"/>	NI N/A
a) Copy of waste evaluation on-site 3 years? (Rule 307(1): 40 CFR 262.40(c))	GGR	<input checked="" type="checkbox"/>	NI N/A
b) Re-evaluated waste when changes in materials or process? (Rule 302(3))	GGR	<input checked="" type="checkbox"/>	NI N/A
2. Did generator have written waste analysis plan if treating wastes on-site? (Rule 306)(l)(d): 40 CFR 268.7(a)(5)	GLB	<input checked="" type="checkbox"/>	NI N/A

IDENTIFICATION NUMBER (Rule 303: 40 CFR 262.12)

3. Has the generator obtained an identification number? (Rule 303: 40 CFR 262.12)	GGR	<input checked="" type="checkbox"/>	NI N/A
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MANIFEST REQUIREMENTS (Rule 304: 40 CFR 262.20)

4. Copies of the manifest readily available for review & inspection? (Section 11138(1)(f))	GMR	<input checked="" type="checkbox"/>	NI N/A
5. Manifests kept for the past 3 years? (Rule 307(3): 40 CFR 262.40(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
6. Manifests, prepared by the generator (Rule 304(1)(a): 40 CFR 262.20(a)), contain the following?	GMR	<input checked="" type="checkbox"/>	NI N/A
a) Manifest document number. (Rule 304(2)(a): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
b) Generator's name, address, phone & ID # (Rule 304(2)(b): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
c) Name & ID # of the transporter. (Rule 304(2)(c): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
d) Name, address & ID # of TSDF. (Rule 304(2)(d): 40 CFR 262.20(b)&(c))	GMR	<input checked="" type="checkbox"/>	NI N/A
e) DOT description of waste(s). (Rule 304(2)(e): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
f) Quantity of waste, type & # of containers. (Rule 304(2)(f): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
g) Hazardous waste number of the wastes. (Rule 304(2)(g): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/>	NI N/A
h) Generator signature, initial transporter & date of acceptance? (Rule 304(4)(a)&(b): 40 CFR 262.23(a)(1)&(2))	GMR	<input checked="" type="checkbox"/>	NI N/A
7. Submitted copy of manifests to Director no later than 10 days after month shipment was made? (Rule 304(4)(d))	GMR	<input checked="" type="checkbox"/>	NI N/A
8. For out-of-state manifests, was copy of 3 rd signature manifest submitted to Director? (Rule 304(4)(f))	GMR	<input checked="" type="checkbox"/>	NI N/A
9. Is the transporter used properly registered/permitted under Act 138, Section (3)(2)? (Rule 304(1)(c))	GPT	<input checked="" type="checkbox"/>	NI N/A

NOTE: For shipments of hazardous waste solely by water or rail shipments, within United States see Rule 304(4)(g or h).

10. Using manifest that has expired? (Rule 304(2)(i) : 40 CFR 262.20(a))	GMR	YES/NO <input checked="" type="checkbox"/> NI <input type="checkbox"/> N/A
11. Reportable exceptions. (Rule 308(3): 40 CFR 262.42)		
a) Number of manifests generator HASNT receive signed copy from TSD w/in 35 days.	GRR	
b) Manifests generator HASNT submitted exception reports to RA & DEQ after 45 days	GRR	
12. Facility has written program to reduce volume/toxicity/recycle wastes? (Rule 304(2)(i):40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/> NI N/A

OR

13. Facility discusses program in place to reduce volume/toxicity/recycle of waste (Rule 304(2)(i): 40 CFR 262.20(a))	GMR	<input checked="" type="checkbox"/> NI N/A
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**LAND DISPOSAL RESTRICTION REQUIREMENTS
WASTE ANALYSIS AND RECORDKEEPING (40 CFR 268.7)(Rule 311(1))**

14. Did the generator determine if the waste is restricted from land disposal? (40 CFR 268.7(a)(1))		
a) All listed waste	GLB	<input checked="" type="checkbox"/> NI N/A
b) All characteristic wastes?	GLB	<input checked="" type="checkbox"/> NI N/A

NOTE: If waste has both listed & characteristic waste codes, the treatment standard for the listed waste is sufficient if the treatment standards for the listed waste includes a standard for the constituent that caused the waste to exhibit the characteristic, except for D001 and D002. (40 CFR 268.9(b))

15. If restricted waste exceeds treatment standards or prohibitions did notice go w/ initial shipment? (40 CFR 268.7(a)(2))	GLB	<input type="checkbox"/> NI N/A
---	-----	---------------------------------

OR

16. If restricted waste does not exceed treatment standards or prohibitions did a notice and certification statement go with initial shipment? (40 CFR 268.7(a)(3))	GLB	<input type="checkbox"/> NI N/A
---	-----	---------------------------------

OR

17. If waste has exemption from prohibition on the type of land disposal method utilized for the waste, did a notice go with initial shipment? (40 CFR 268.7(a)(4))	GLB	<input type="checkbox"/> NI N/A
---	-----	---------------------------------

OR

18. If facility choose alternative treatment standard for lab pack that contains none of the waste in appendix IV, did a notice & certification go with initial shipment? (40 CFR 268.7(a)(9))	GLB	<input type="checkbox"/> NI N/A
19. Did the notice include: (40 CFR 268.7(a)(1) or 268.7(a)(2) or 268.7(a)(3))		
a) EPA hazardous waste #?	GLB	<input type="checkbox"/> NI N/A
b) If wastewater or non-wastewater as defined in 268.2(d&f)?	GLB	<input type="checkbox"/> NI N/A
c) Subcategory of the waste (such as D003 reactive cyanide) if applicable?	GLB	<input type="checkbox"/> NI N/A
d) Manifest number associated with the shipment?	GLB	<input type="checkbox"/> NI N/A
e) Waste analysis data, where available?	GLB	<input type="checkbox"/> NI N/A
f) Waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for F001- F005, F039, D001, D002, D012-D043? (treatment standards for hazardous waste in table in 268.40 for the waste code under regulated constituents)	GLB	<input type="checkbox"/> NI N/A

UNLESS

g) Did generator/treater claim they are going to monitor for ALL regulated constituents in the waste in lieu of the generator indicating same in the notice? (40 CFR 268.7(a)(1) & 268.9	GLB	YES/NO <input type="checkbox"/> NI N/A
h) Did generator/treater claim they are going to monitor for underlying hazardous waste constituents (except vanadium and zinc), reasonably expected to be present at the generation point, above UTS standards for D001, D002 & TCLP organics? (40 CFR 268 Subpart D & 268.48)	GLB	<input type="checkbox"/> NI N/A

20. Other than notices for waste exceeding treatment standards, did notices include:		
a) If the notice is for shipments that meet the standards does the notice include the certification	GLB	YES/NO <input checked="" type="checkbox"/> NI N/A
b) If the notice is for shipments under prohibitions does the notice include a statement that the waste isn't prohibited from land disposal & date the waste is subject to prohibition?	GLB	<input checked="" type="checkbox"/> NI N/A

NOTE: An alternate treatment standard may be used after approval from the Administrator. (40 CFR 268.44)
NOTE: Hazardous waste debris see 40 CFR 268.7(a)(1)(iv) for the notice requirements which must be followed by the statement "This hazardous debris is subject to alternative treatment standards of 40 CFR 268.45."

21. Generator retain on-site records to support determination from knowledge or results from tests? (40 CFR 268.7(a)(6))	GLB	<input checked="" type="checkbox"/> NI N/A
22. If the restricted waste is excluded from being a hazardous waste or solid waste did the generator place a one- time notice stating same in the facility file? (40 CFR 268.7(a)(7))	GLB	<input checked="" type="checkbox"/> NI N/A
23. All notices/certifications/demonstrations/other documents retained for 3 years on-site? (40 CFR 268.7(a)(8)).	GLB	<input checked="" type="checkbox"/> NI N/A

NOTE: This requirement (268.7(a)(8)) applies to solid waste even when the hazardous waste characteristic is removed prior to disposal or when the waste is excluded from the definition of hazardous waste or solid waste.

DILUTION PROHIBITED AS SUBSTITUTE FOR TREATMENT (40 CFR 268.3) RULE 311(1)

24. Generator dilute hazardous waste or treatment residue of a hazardous waste to avoid prohibition? (40 CFR: 268.3(a))	GLB	<input checked="" type="checkbox"/> NI N/A
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TREATMENT STANDARDS (40 CFR 268.40) RULE 311(1)

25. If wastes exceeding treatment standards are mixed, was the most stringent standards selected? (40 CFR 268.40(c))	GLB	<input checked="" type="checkbox"/> NI N/A
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BIENNIAL REPORT (Rule 308: 40 CFR 262.41)

26. Generator submitted biennial report by 3/1 (even years)? (Rule 308(1): 40 CFR 262.41)	GRR	<input checked="" type="checkbox"/> NI N/A
27. Were copies of the report retained at least 3 years? (Rule 307(4): 40 CFR 262.40(b))	GRR	<input checked="" type="checkbox"/> NI N/A

PRE-TRANSPORTER REQUIREMENTS (Rule 305: 40 CFR 262.30)

28. Waste packaged according to DOT regulations (required before shipping waste off-site)? (Rule 305(1)(a): 40 CFR 262.30))	GPT	co.said observed <input checked="" type="checkbox"/> NI N/A
29. Are waste packages marked & labeled according to DOT concerning hazardous materials (required before shipping waste off-site)? (Rule 305(1)(b)(c): 40 CFR 262.32(a))	GPT	co.said observed <input checked="" type="checkbox"/> NI N/A
30. On containers 110 gallons or less, is there a warning, generator's name, address, manifest document # & waste code; 49 CFR 172.304? (Rule 305(1)(d): 40 CFR 262.32(b))	GPT	co.said observed <input checked="" type="checkbox"/> NI N/A
31. If required, are placards available to the transporter? (Rule 305(1)(e): 40 CFR 262.33)	GPT	<input checked="" type="checkbox"/> NI N/A

ACCUMULATION TIME (Rule 306: 40 CFR 262.34)

32. If hazardous waste accumulated in containers: (If no, skip to #35)		
a) Containers have accumulation date & visible? (Rule 306(1)(b): 40 CFR 262.34(a)(2))	GPT	<input checked="" type="checkbox"/> NI N/A
b) Container have words "Hazardous Waste"? (Rule 306(1)(c): 40 CFR 262.34(a)(3))	GPT	<input checked="" type="checkbox"/> NI N/A
c) Is each container clearly marked with the hazardous waste number? (Rule 306(1)(b))	GPT	<input checked="" type="checkbox"/> NI N/A
d) Has more than 90 days elapsed since date marked? (Rule 306(1))	GPT	<input checked="" type="checkbox"/> NI N/A

UNLESS

e) The generator applied for & received an extension to accumulate longer? (Rule 306(3): 40 CFR 262.34(b))	GPT	<input type="checkbox"/> NI N/A
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The following Subpart I, 265.170 to 265.177 requirements are referred to by Rule 306(1)(a) and 40 CFR 262.34(a)(1).

f) Are containers in good condition? (265.171)	GPT	<input checked="" type="checkbox"/> NI N/A
--	-----	--

g) Are containers compatible with waste in them (265.172)	GPT	<input checked="" type="checkbox"/> YES/NO	NI N/A
h) Are containers stored closed? (265.173(a))	GPT	<input checked="" type="checkbox"/> NI N/A	
i) Containers handled/stored in a way which may rupture it or cause leaks? (265.173(b))	GPT	<input checked="" type="checkbox"/> NI N/A	
j) Ignitable & reactive wastes stored 15 meters (50 feet) from property line? (265.176)	GPT	<input checked="" type="checkbox"/> NI N/A	
k) Are containers inspected weekly for leaks and defects? (265.174)	GPT	<input checked="" type="checkbox"/> NI N/A	
l) Did the generator document the inspections in 32(k)? (Rule 306(1)(a)(i))	GPT	<input checked="" type="checkbox"/> NI N/A	
m) Inspection documents maintained on-site 3 years? (Rule 306(1)(a)(i))	GPT	<input checked="" type="checkbox"/> NI N/A	
n) Are incompatible wastes stored in separate containers? (265.177(a))	GPT	<input checked="" type="checkbox"/> NI N/A	
o) Hazardous wastes put in unwashed containers that previously held incompatible waste. (265.177(b))	GPT	<input checked="" type="checkbox"/> NI N/A	
p) Incompatible waste separated/protected from each other by physical barriers or sufficient distance? (265.177(c))	GPT	<input checked="" type="checkbox"/> NI N/A	
33. If hazardous waste is being accumulated at the point of generation:			
a) Container(s) <55 gal or 1 qt acutely/severely toxic? (Rule 306(2):40 CFR 262.34(c)(1))	GPT	<input checked="" type="checkbox"/> NI N/A	
b) Container(s) under operator control & near the point of generation? (Rule 306(2): 40 CFR 262.34(c)(1))	GPT	<input checked="" type="checkbox"/> NI N/A	
c) Container(s) have words "Hazardous Waste"? (Rule 306(2): 40 CFR 262.34(c)(1)(ii))	GPT	<input checked="" type="checkbox"/> NI N/A	
d) Are the container(s) marked with the hazardous waste number or chemical name? (Rule 306(2))	GPT	<input checked="" type="checkbox"/> NI N/A	

Rule 306(2) & 40 CFR 262.34(c)(1)(i) both refer to 40 CFR 265.171, 265.172 & 265.173(a).

e) Are container(s) in good condition? (265.171)	GPT	<input checked="" type="checkbox"/> NI N/A	
f) Are container(s) compatible with waste in them? (265.172)	GPT	<input checked="" type="checkbox"/> NI N/A	
g) Container(s) closed when not in use & managed to prevent leaks? (265.173(a))	GPT	<input checked="" type="checkbox"/> NI N/A	
34. If generator exceeded 55 gallons or 1 quart, w/in 3 days did generator, w/respect to that amount of excess waste: (Rule 306(2): 40 CFR 62.34(c)(2))			
a) Mark the container with the date the excess amount began accumulating?	GPT	<input checked="" type="checkbox"/> NI N/A	
b) Move to an area with secondary containment?	GPT	<input checked="" type="checkbox"/> NI N/A	

Rule 306(1)(a) refers to containment requirements in 40 CFR 264.175.

35. If accumulating free liquids or any F020, F021, F022, F023, F026, F027, does the hazardous waste storage area include			
a) Impervious base free of cracks? (264.175(b)(1)):	GPT	<input type="checkbox"/> NI N/A	
b) Sloped or otherwise designed to elevate/protect containers from contact with liquids? (264.175(b)(2))	GPT	<input type="checkbox"/> NI N/A	
c) Hold 10% of volume of containers or volume of the largest container, whichever is greater? (264.175(b)(3))	GPT	<input type="checkbox"/> NI N/A	
d) Run-on prevented unless sufficient capacity? (264.175(b)(4))	GPT	<input type="checkbox"/> NI N/A	
e) Accumulated liquids removed in a timely manner to prevent overflow? (264.175(b)(5))	GPT	<input type="checkbox"/> NI N/A	
36. If accumulating solids, (other than F020, F021, F022, F023, F026, F027), is haz waste accumulation area sloped or otherwise designed, or containers elevated or otherwise protected from contact with liquids? (264.176(c))	GPT	<input type="checkbox"/> NI N/A	

Closure of accumulation area(s) is under question 51.

37. Is hazardous waste accumulated in other than tanks or containers? Or, is hazardous waste generated, but not accumulated, i.e.: process tank? <i>Explain any yes answer.</i>		<input checked="" type="checkbox"/> NI N/A	
38. Waste area protected from weather, fire, physical damage & vandals? (Rule 306(1)(e))	GPT	<input checked="" type="checkbox"/> NI N/A	
39. Hazardous waste accumulated so no hazardous waste or hazardous waste constituent can escape by gravity into soil, directly or indirectly, into surface, ground-waters, drains or sewers, and such that fugitive emissions do not violate Act 451, Part 55? (Rule 306(1)(f))	GPT	<input checked="" type="checkbox"/> NI N/A	

40. Is hazardous waste accumulated in tanks?	If so, complete Tank System inspection form.	YES/NO <input checked="" type="checkbox"/> NI N/A
41. Is hazardous waste placed on drip pads?	If so, complete Wood Preserving inspection form	NI N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refers to 265.16
PERSONNEL TRAINING (265.16)

42. Did personnel receive training? (265.16)	GPT	<input checked="" type="checkbox"/> NI N/A
Do personnel training records contain the following		
a) Job title? (265.16(d)(1))	GPT	<input checked="" type="checkbox"/> NI N/A
b) Job descriptions? (265.16(d)(2))	GPT	<input checked="" type="checkbox"/> NI N/A
c) Name of employee filling each job? (265.16(d)(1))	GPT	<input checked="" type="checkbox"/> NI N/A
d) Description of type & amount of both introductory & continued training? 265.16(d)(3))	GPT	<input checked="" type="checkbox"/> NI N/A
e) Training designed so facility personnel can respond to emergencies? (265.16(a)(3))	GPT	<input checked="" type="checkbox"/> NI N/A
f) Records of training? (265.16(d)(4))	GPT	<input type="checkbox"/> NI N/A
g) Do new personnel receive required training within 6 months? (265.16(b))	GPT	<input type="checkbox"/> NI N/A
h) Do training records show personnel have taken part in annual training? (265.16(c))	GPT	<input checked="" type="checkbox"/> NI N/A
i) Training by person trained in hazardous waste management procedures? (265.16(a)(2))	GPT	<input type="checkbox"/> NI N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refer to 265, Subpart C, 265.30-265.37.
PREPAREDNESS AND PREVENTION (265.30-265.37)

43. Facility maintained/operated to minimize possibility of fire, explosion, release of hazardous waste or hazardous waste constituent which could threaten human health/environment? (265.31)	GPT	co.said <input checked="" type="checkbox"/> observed <input checked="" type="checkbox"/> NI N/A
44. If required, does this facility have the following equipment:		
a) Internal communications or alarm systems? (265.32(a))	GPT	<input checked="" type="checkbox"/> NI N/A
b) Telephone or 2-way radios at the scene of operations? (265.32(b))	GPT	<input checked="" type="checkbox"/> NI N/A
c) Portable fire extinguishers, fire control, spill control equipment and decontamination equipment? (265.32(c))	GPT	<input checked="" type="checkbox"/> NI N/A
d) Adequate volume of water and/or foam available for fire control? (265.32(d))	GPT	<input checked="" type="checkbox"/> NI N/A
45. Testing and Maintenance of Emergency Equipment:		
a) Owner/operator test & maintain emergency equipment to assure operation? (265.33)	GPT	<input checked="" type="checkbox"/> NI N/A
b) Has owner/operator provided immediate access to internal alarms? (265.34(a & b))		
NOTE: Access to communication or alarm system is applicable only if required 40 CFR 265.32		
i) When hazardous waste is being poured, mixed, etc.	GPT	<input checked="" type="checkbox"/> NI N/A
ii) One employee on the premises while facility is operating.	GPT	<input checked="" type="checkbox"/> NI N/A
c) Aisle space for unobstructed movement of personnel/emergency equipment? (265.35)	GPT	<input checked="" type="checkbox"/> NI N/A
46. Has the facility made arrangements with local authorities? (265.37(a)&(b))	GPT	<input checked="" type="checkbox"/> NI N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refer to Subpart D, 265.50-265.56.
CONTINGENCY PLAN AND EMERGENCY PROCEDURES (265.50-265.56)

47. Plan implemented whenever fire/explosion/release could threaten human health or the environment? (265.51(b))	GPT	<input checked="" type="checkbox"/> NI N/A
48. Does the contingency plan contain the following:		
a) Actions personnel must take responding to fires/explosions/unplanned release of hazardous waste? (265.52(a & b))	GPT	<input checked="" type="checkbox"/> NI N/A
b) Describe arrangements or attempts w/ local police, fire, hospitals, contractors, state & local emergency responders for emergency services; (265.52(c)) & (265.37(a)&(b))?	GPT	<input checked="" type="checkbox"/> NI N/A
c) Name, addresses & phone (office & home) of emergency coordinator? (265.52)(d))	GPT	<input checked="" type="checkbox"/> NI N/A

d) List emergency equipment at the facility, including location, physical description & capabilities? (265.52(e))	GPT	YES/NO <input checked="" type="checkbox"/> NI N/A
e) Evacuation plan for personnel w/ signal(s), evacuation routes & alternate evacuation routes. (265.52(f))	GPT	<input checked="" type="checkbox"/> NI N/A
49. Does the facility have an Emergency Coordinator? (265.55)	GPT	<input checked="" type="checkbox"/> NI N/A
Emergency Coordinator and Emergency Procedures:		
a) Emergency coordinator familiar with site operation & emergency procedures? (265.55)	GPT	<input checked="" type="checkbox"/> NI N/A
b) Emergency coordinator has the authority to carry out the contingency plan? (265.55)	GPT	<input checked="" type="checkbox"/> NI N/A
c) If emergency occurred, did the emergency coordinator follow emergency procedures? (265.56)	GPT	<input checked="" type="checkbox"/> NI N/A
d) Fire/explosion/other release of hazardous waste/haz. waste constituents, could threaten human health or environment or generator has knowledge spill reached surface or ground water, did generator notify MDEQ? (Rule 306(1)(d))	GPT	<input checked="" type="checkbox"/> NI N/A
50. Contingency plan Amendments and Copies		
a) Amended: fails in emergency; changes in regulations/emergency coordinators/emergency equipment? (265.54)	GPT	<input checked="" type="checkbox"/> NI N/A
b) Copies of plan on site and sent to local emergency organizations? (265.53)	GPT	<input checked="" type="checkbox"/> NI N/A

Rule 309 refers to 262, Subpart E except 262.54 & 262.55
INTERNATIONAL SHIPMENTS (Rule 309 & 310: 40 CFR 262.50-262.60)

51. Has the facility imported or exported hazardous waste?	GOR	<input type="checkbox"/> NI N/A
a) Exporting, has the generator:	GOR	<input type="checkbox"/> NI N/A
i) Notified the Administrator in writing <12 months prior to shipment? (262.53(a))	GOR	<input type="checkbox"/> NI N/A
ii) Receiving country consented to accept waste. (262.52(b))	GOR	<input type="checkbox"/> NI N/A
iii) Has copy of EPA Acknowledgment of Consent. (262.52(c))	GOR	<input type="checkbox"/> NI N/A
iv) Complied with manifest requirements in Rule 309(2)(a-i).	GOR	<input type="checkbox"/> NI N/A
v) If required, was an exception report filled. (309(3)(a-c))	GOR	<input type="checkbox"/> NI N/A
b) Importing, has the generator met manifest requirements? (Rule 310: 40 CFR 262.60)	GOR	<input type="checkbox"/> NI N/A

Rule 306(1)(g) and 40 CFR 262.34(a)(1) refers to 40 CFR 265.111 & 265.114
ACCUMULATION AREA CLOSURE (265.111 & 265.114)

52. The accumulation area must be closed in a manner that: (265.111 & 265.114)		
a) Minimizes need for further maintenance.	GPT	<input type="checkbox"/> NI N/A
b) Controls/minimizes/eliminates, to protect human health & environment, the escape of haz. waste or haz. waste constituents, leachate, run-off to ground/surface waters and air.	GPT	<input type="checkbox"/> NI N/A
c) All contaminated equipment, structures, and soil properly disposed of.	GPT	<input type="checkbox"/> NI N/A

Comments:

Site Information

Site ID: MID005357504
WMD ID: 393451
AR Customer ID: 124792
NAICS Codes: 331421 - Copper Rolling

Site Legal Name: MUELLER BRASS CO
Site Specific Name: MUELLER BRASS CO
District: SOUTHEAST MICHIGAN

Location Address [Map it! With Expedia](#)

Address: 2199 LAPEER AVE
City: PORT HURON
State: MI
Zip Code: 48060
County: ST CLAIR
Country: U.S.A.

Mailing Address [Map it! With Expedia](#)

Address: 2199 LAPEER AVE
City: PORT HURON
State: MI
Zip Code: 48060
County: ST CLAIR
Country: U.S.A.

Latitude:

Longitude:

Collection Method:

Employee Count: 399

Facility on Indian Reservation Land: ☐

Groundwater Jurisdiction:

Receives All Waste: ☐

Scrap Tires Acres:

Scrap Tires Processor: ☐

Site Contacts

<u>Contact Type</u>	<u>Name</u>	<u>Phone</u>	<u>Ext.</u>	<u>Fax</u>	<u>Email</u>
Part 111 or 121 site contact	DONALD INSALCO	(810) 987-7770	679		
TSD Facility	WILLIAM ROLL	(313) 987-4000			

Site Owners / Operators

<u>Name</u>	<u>Organization Type</u>	<u>Active</u>	<u>Inactive</u>	<u>Owner</u>	<u>Operator</u>
MUELLER BRASS CO	Private	1/1/70		<input checked="" type="checkbox"/>	<input type="checkbox"/>
MUELLER BRASS CO	Private	1/1/70		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Most Recent Site Activity

[\[top\]](#)

Discovery Date: 2/14/02

Source of Information: Biennial Reporting (Site)

Hazardous Waste Activity

Generator Status: LQG

☐ No Regulated Waste Activity

Transporter

☐ Transporter of Hazardous Waste

☐ Commingle Waste

☐ Transfer Facility

Used Oil Activities

Used Oil Fuel Marketer

☐ Direct Ship Off-Spec Used Oil to Used Oil Burner

☐ Marketer who first claims the Used Oil meets Specs

☐ Off-Spec Used Oil Burner

Used Oil Transfer Facility

☐ Transporter Only

☐ Transporter With Transfer Facility

Designated Facility

- ☐ Treats Onsite
☐ Stores Onsite
☐ Disposes Onsite
☐ Recycles Recyclable Material Onsite

- ☐ Used Oil Processor
☐ Used Oil Re-Refiner
☐ Used Oil Collection

Universal Waste Activities

- ☐ Underground Injects Onsite
☐ Import Agent for Hazardous Waste
☐ Generate Mixed Radioactive Waste
☐ Accepts & Accumulates CESQG Waste > 1000 kg

- ☐ Large Quantity Handler

Exempt Boiler and/or Industrial Furnace

- ☐ Smelting/Melting/Refining Furnace Exempt
☐ Small Quantity Onsite Burner Exempt

G	Type of UW Waste	A
<input type="checkbox"/>	<u>Batteries</u>	<input type="checkbox"/>
<input type="checkbox"/>	<u>Thermostats</u>	<input type="checkbox"/>
<input type="checkbox"/>	<u>Mercury Thermometers</u>	<input type="checkbox"/>
<input type="checkbox"/>	<u>Elemental Mercury</u>	<input type="checkbox"/>
<input type="checkbox"/>	<u>Mercury Switches</u>	<input type="checkbox"/>
<input type="checkbox"/>	<u>Pesticides</u>	<input type="checkbox"/>
<input type="checkbox"/>	<u>Electric Lamps</u>	<input type="checkbox"/>

Generation of Waste Ceased or Sited

- ☐ No Longer Generating / Still In Business
☐ No Longer Generating / Out Of Business
Date Generation Ceased :

- ☐ Destination Facility of Universal Waste

Liquid Industrial Waste

- ☐ Transfer to Cleanup
☐ Emergency Site

- ☐ LIW Transporter
☒ LIW Generator
☐ LIW Designated Facility

Previous Site Activity Record(s)

Date	Source of Information
<u>3/10/00</u>	State (State)
<u>11/19/80</u>	Part A (Site)
<u>8/12/80</u>	Notification (Site)

Site Comments

Date	Comment Type	Comment
4/9/03	111/121-HW/LIW	SQG VERIFICATION - EVERYTHING THE SAME - GEK
2/14/02	111/121-HW/LIW	2001 BIENNIAL REPORT - NO CHANGES-ES.
12/21/00 5:43:00 AM	111/121-HW/LIW	3/10/00-INSPECTION BY G. SUUPPI. CHANGE CONTACT NAME, STREET NUMBER, PHONE NUMBER, HAZ WASTE CODES-ES.



JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

XXXXXXXXXXXXXXXXXXXX

Gordon E. Guyer, Director
Waste Management Division
505 W. Main
Northville, MI 48167

June 30, 1987

NATURAL RESOURCES COMMISSION
THOMAS J. ANDERSON
MARLENE J. FLUHARTY
ERIK N. V. MONSMA
STEWART MYERS
MID D. OLSON
RAYMOND POUPORE
HARRY H. WHITELEY

Donald Bringman
Mueller Brass Co.
1925 Lapeer Ave.
Port Huron, MI 48090

RE: MID 005357504

Dear Mr. Bringman

On June 2, 1987 an inspection was conducted at your facility located at 1925 Lapeer Ave., Port Huron, Michigan. The purpose of the inspection was to evaluate compliance of that facility with the F-Solvent Land Disposal restriction requirements of Subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976, as amended.

As a result of that inspection, it has been determined that your facility is in violation of the following requirements:

1. Notification is required for each shipment of waste (going to a treatment facility) that meets the definition of a restricted F-Solvent waste. This requirement includes noting which solvents are in the waste, the waste code number, manifest number, the applicable treatment standard (wastewater or other), and waste analysis data. Waste analysis data for a notification is supplying knowledge of your waste to the treatment facility. Knowledge can be shown by analysis reporting % solvents, or MSDS's, etc. Again, this information is to be supplied with each shipment of a restricted waste.

An example of a notification form has been sent as an aid. Send to this office an example of notification that you will adopt of a restricted waste shipment going from Mueller Brass to a treatment facility. Include a copy of the sample manifest that the notification would accompany.


Compliance with the requirements outlined above should begin with receipt of this letter.

page 2, June 30, 1987
Mueller Brass Co.
Port Huron, MI 48090
RE: MID 005357504

We request your response by July 20, 1987 documenting your corrective actions to these violations.

If you have any questions, please contact me at (313) 344-4670.

Sincerely,



Daria W. Deventier
Environmental Quality Analyst

dwd/mkp

Enclosure

cc: B. Okwumabua
EPA, Region V

RECEIVED
JUL 27 1987

U.S. EPA REGION V
WASTE MANAGEMENT DIVISION
Hazardous Waste Enforcement Branch

ACT 64 INSPECTION REPORT

U.S. EPA I.D. NUMBER
(or Michigan)

M 1 0 0 0 5 3 5 7 5 0 4

FACILITY NAME

Mueller Brass Co.
1925 Lapeer Ave

Port Huron

MICHIGAN

48090

CITY

ZIP CODE

DATE

6-2-87

TIME OF INSPECTION (FROM) (TO)

PERSON(S) INTERVIEWED

TITLE

TELEPHONE

Robert Mancini

313/987-4000

INSPECTOR(S)

AGENCY/TITLE

TELEPHONE

Daria Devantier

313/344-4670

Primary Business of this Facility:

Reason for Inspection:

LAND BAN

 Routine

 Follow-up

 Complaint

INSPECTION FORMS:

Based upon the inspection, this facility:

FORM

- is a non-generator/conditionally exempt small quantity generator
 small quantity generator
 generator
 transporter
 treatment/storage/disposal facility

A
A
E
C
U

Date of Last Inspection

MUELLER BRASS CO.

PORT HURON, MICHIGAN 48060



Area Code 313

Tel: 987-4000

NOV 10 1986

U.S. EPA, REGION V

October 4, 1986

United States Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Attention: Region V Administrator

Subject: Pollution Incident - Implementation
of Contingency Plan

Dear Sir:

The following subject report is submitted to
your attention as required under RCRA.

- | | |
|---|--|
| (1) Name, address and telephone number of the owner. | Mueller Brass Co.
1925 Lapeer Ave.
Port Huron, Michigan 48060
(313) 987-4000 |
| (2) Name, address and telephone number of facility. | Mueller Brass Co.
1925 Lapeer Ave.
Port Huron, Michigan 48060
(313) 987-4000 |
| (2.1) EPA Identification number of facility. | MID 005357504 |
| (3) Date and time of incident. | October 21, 1986
Approximately 8:45 a.m. |
| (3.1) Type Incident | Oil loss. |
| (4) Name and quantity of material involved. | Oil (approximately 55 gallons)
Captured and recovered inside boom. A small oil sheen was the only visible loss. |
| (5) Extent of injuries. | None. |
| (6) Accessment of potential hazards to human health or the environment. | None. |

Page 2
October 4, 1986
United States Environmental Protection Agency

(7) Estimated quantity and disposition of recovered material that resulted from the incident.

A vacuum truck tanker pumped approximately 55 gallons of oil contained within our boom. Absorbent pads and booms were used to finish cleaning inside the boom. The absorbent material was placed in plastic bags and then into drums for proper disposal. The oil recovered in the tanker was reclaimed.

Please let me know if you require further information.

Very truly yours,

MUELLER BRASS CO.



D. F. Bringman
Facility Engineer,
Alternate Emergency Coordinator

:vlt

cc: MDNR
Coast guard
St. Clair County Emergency Services Coordinator
PIPP Committee
D. J. Mailander

OCT 23 1984

Mr. Ray M. Berra
Director of Engineering
Mueller Brass Company
1925 Lapeer Avenue
Port Huron, Michigan 48090

Re: Mueller Brass Company
MID 005 357 504

Dear Mr. Berra:

The United States Environmental Protection Agency (U.S. EPA), Region V, has received Mueller Brass Company's (MBCo.) submittal of September 25, 1984, regarding ongoing review of MBCo. request for change in status from a Resource Conservation and Recovery Act (RCRA) treatment, storage and disposal facility to a generator only.

Our review of this request along with the information submitted on June 15, 1984, July 26, 1984, and September 25, 1984, in support of the request, has concluded the following:

1. Skins (RCRA hazardous waste D008) generated from MBCo brass melting operations, which are stored in bins prior to shipment offsite for copper reclamation, comply with 40 CFR 261.6(a) and are not subject to regulations under 40 CFR 262 through 265, 270, 271 and 124.
2. Dust (baghouse wastes) captured from onsite air pollution control facilities at MBCo. is a RCRA hazardous waste by virtue of exhibiting EP toxicity for lead (D008) and cadmium (D005). U.S. EPA considers the bags, which collect and accumulate the dust, to comply with the definition of containers in 40 CFR 260.10. Since MBCo. ships this RCRA hazardous waste offsite in less than 90 days, it is not subject to RCRA Interim Status or Part B permit requirements for this activity. However, MBCo. is subject to all applicable requirements of 40 CFR 262, especially 40 CFR 262.34 with regard to the proper management of baghouse waste:

- 2.1 The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container;
 - 2.2 While being accumulated onsite, each container is labeled or marked clearly with the words "Hazardous Waste";
 - 2.3 Comply with the 40 CFR 265 Subparts C (Preparedness and Prevention), D (Contingency Plan), and 265.16 (Personnel Training); and
 - 2.4 Comply with 40 CFR 265 Subpart 1 (Use and Management of Containers).
3. The "T-7 Clairifier" and sludge storage units comply with the exemption requirements in 40 CFR 264.1(g)(6) and are not subject to the requirements of 40 CFR Part 264.

Per the above discussion, MBCo.'s request for change in status from a RCRA treatment, storage and disposal facility, to a generator only has been approved. As a result, the RCRA Part B application call-in date of October 22, 1984, is rescinded.

The retention of the U.S. EPA I.D. Number will allow MBCo. to be a RCRA generator of hazardous waste and to accumulate these wastes onsite in containers for less than 90 days. As stated, the regulations at 40 CFR Part 262 and other regulations referenced therein govern RCRA generator activities.

Should you decide in the future to initiate storage of RCRA hazardous waste for greater than 90 days, the issuance of a RCRA permit pursuant to 40 CFR Parts 124, 264 and 270 will be a prerequisite for such storage.

If you have any questions, please contact Mr. Timothy B. O'Mara of my staff at (312) 886-4023, for assistance.

Sincerely yours,

Karl J. Klepitsch, Jr., Chief
Waste Management Branch

cc: Alan Howard (MDNR) (w/copy of incoming) ✓

INITIALS	TYPIST	AUTHOR	STU #1 CHIEF	STU #2 CHIEF	STU #3 CHIEF	TPS CHIEF	WMB CHIEF	WMD DIRECTOR
	JH	KJK			WEM	10/17/84	10/19/84	10/19/84
DATE	10-16-84	8/10/17						

10/20/84



T.R. VALENTINE
& ASSOCIATES INC.
Consulting Engineers
Land Surveyors
209 Glenwood Avenue
Port Huron, Michigan 48060
Telephone: (313) 985-4848

Thomas R. Valentine, P.E.
Robert P. Nelson, P.E.
Michael J. Rossow, R.L.S.
Richard D. Collins, Associate
Jeffrey C. Currier, Associate

September 25, 1984

Mueller Brass Company
1925 Lapeer Avenue
Port Huron, MI 48060

Attn: Ray Berra, Director of Engineering

Re: Mueller Brass Company (MBCO); Reply to U.S.EPA letter of August 27, 1984;
MID 005357504

Dear Sir:

In answer to U.S.EPA letter to MBCO dated 8/27/84 we would hereby offer the following in answer to information requested.

We concur with U.S.EPA and MBCO in that baghouse dust is a RCRA hazardous waste and submit the appended MDNR RCRA Inspection Report dated 8/1/83, followup letters dated 8/17/83 and 8/29/83 as documentation of compliance. Moreover, the MBCO "Pollution Incident Prevention Plan" and "Spill Prevention Control and Countermeasure Plan" has been recently updated and resubmitted.

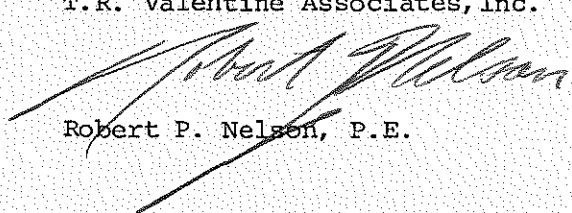
In reference to the latter portion of the EPA letter, we would suggest that the "T-7 Clarifier" and "sludge storage" units be redefined as "wastewater treatment units". As was mentioned in the EPA review letter, RCRA regulation 40 CFR 264.1 (g) (6) exempts wastewater treatment facilities which meet three criteria noted in the definition of "wastewater treatment units" (40 CFR 260.10). The three criteria establishing "T-7 Clarifier" and "sludge storage" units as "wastewater treatment units" are listed below with brief documentation:

- 1) The MBCO wastewater treatment facility is presently monitored by and subject to regulation by the City of Port Huron POTW under their operating Industrial Pretreatment Programs. Although not yet formally approved, Port Huron has submitted to MDNR for final review and approval their Industrial Pretreatment Program in accordance with Section 307 (b) of the Clean Water Act. Approval of Port Huron program is anticipated by December 1, 1984.
- 2) In conformance with the definition, it is the function of the subject clarifier to accumulate and the storage unit to store wastewater treatment sludges which are of hazardous nature as defined in 40 CFR 261.3. Composition of wastes have been denoted in previous submittals.

- 3) Lastly, in order for the clarifier and sludge storage units to be classified as wastewater treatment devices they must each meet the definition of "tank" in 40 CFR 260.10. Both units are stationary and are constructed of non-earthen materials. The clarifier is an 8,000 gallon (working volume) steel tank, 13'x13' top dimension tapering to the bottom. The "sludge storage unit" has a working volume of 4,400 gallons and is constructed of fiberglass. This tank has base dimensions of 8'x9' and a height of 11'.

With the information submitted herewith, we foresee no cause, based on the 8/27/84 letter, of not being reclassified to the RCRA status of "generator only". Should additional information or clarification be required, please contact our office at your convenience.

Sincerely,
T.R. Valentine Associates, Inc.



Robert P. Nelson, P.E.

Enclosures

RPN/jav

27 AUG 1984

Mr. Ray M. Berra
Director of Engineering
1925 Lapeer Avenue
Port Huron, Michigan 48060

Re: Mueller Brass Company
MID 005357504

Dear Mr. Berra:

The United States Environmental Protection Agency (U.S. EPA) is in receipt of your letter, dated July 26, 1984, which submitted information requested by our letter of July 11, 1984. Our review of this information is given below.

As stated, your determination that baghouse dust is a Resource Conservation and Recovery Act (RCRA) hazardous waste sludge will require compliance with 40 CFR 261.6(b) for storage for less than 90 days of these wastes prior to sale for reclamation. I will emphasize that regulations at 40 CFR 262.34 are central to your proper management of these RCRA hazardous waste sludges.

You must, therefore,

1. Mark each container with the date that accumulation begins;
2. Label each container with the words "Hazardous Waste";
3. Comply with 40 CFR 265 Subparts C (Preparedness and Prevention) and D (Contingency Plan), and 265.16 (Personnel Training); and
4. Comply with 40 CFR 265 Subpart I (Use and Management of Containers).

Your categorization of the "T-7 Clarifier" and the "sludge storage" unit as part of a totally enclosed treatment facility per 40 CFR 260.10 will require you to document that the elements contained in that definition do apply to the wastewater treatment plant at your facility. I will state that U.S. EPA interprets this definition (totally enclosed treatment facility) to mean that no part of such a treatment system is open to the environment and that the operation of such a plant has prevented, continues to prevent and will prevent the release of any hazardous waste or any constituent thereof into the environment during treatment. I will note that there is another exception which may apply to your wastewater treatment plant. The RCRA regulations per 40 CFR 264.1(g)(6), exempt wastewater treatment facilities which meet the 40 CFR 260.10 definition for "wastewater treatment unit".

I request you review the above discussion and provide to the U.S. EPA the RCRA definition which applies to your treatment plant along with any necessary documentation. Based on this submittal, U.S. EPA will be able to finalize its review of your June 15, 1984, request for change in RCRA status to a generator only.

If you have any questions on this matter, please contact Mr. Timothy B. O'Mara of my staff at (312) 886-4023 for assistance.

Sincerely,

William H. Miner, Chief
Technical, Permits and Compliance Section

cc: Alan Howard, MDNR *(w/ copy of incoming)*
w/copy of incoming

5HW-13:TOMARA:mh:6-4023:8-20-84

INITIALS	TYPYST	AUTHOR	STU #1 CHIEF	STU #2 CHIEF	STU #3 CHIEF	TPS CHIEF	WMB CHIEF	WMD DIRECTOR
	<i>MP</i>	<i>THO</i>			<i>WEM</i>	<i>WMB</i>		
DATE	<i>8-22-84</i>	<i>8/23/84</i>			<i>8/23/84</i>	<i>8/24/84</i>		

CP 8-23-84 *IS 8-23-84*

MUELLER BRASS CO.

PORT HURON, MICHIGAN 48060



Area Code 313

Tel: 987-4000

March 2, 1984

United States Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Attention: Region V. Administrator

Subject: Pollution Incident - Implementation of
Contingency Plan

Dear Sir:

The following subject report is submitted to your attention as
required under RCRA.

(1) Name, address and telephone number of the owner.	Mueller Brass Co. 1925 Lapeer Ave. Port Huron, Michigan 48060 (313) 987-4000
--	---

(2) Name, address and telephone number of facility.	Mueller Brass Co. 1925 Lapeer Ave. Port Huron, Michigan 48060 (313) 987-4000
---	---

(2.1) EPA Identification number of facility.	MID 005357504 G, TSD, PA
---	--------------------------

(3) Date and time of incident.	February 23, 1984 Spill was discovered at approximately 6:45 A.M. by maintenance foreman
-----------------------------------	---

RECEIVED
MAR 07 1984
**WASTE MANAGEMENT
BRANCH**

(3.1) Type Incident	Oil spill.
---------------------	------------

(4) Name and quantity of material involved.	New #2 fuel oil - approximately 6,000 gallons.
--	---

- continued -

RECEIVED
3/8/84

March 2, 1984

Page 2

Pollution Incident - Implementation of
Contingency Plan

- (5) Extent of injuries. None.
- (6) Accessment of potential hazards to human health or the environment. None. An estimated 60 gallons of oil was lost. It is estimated that less than 50 gallons were lost to the Black River, some of which was recovered with an absorbent boom. The remainder of the loss was retained by clean up materials and soil.
- (7) Estimated quantity and disposition of recovered material that resulted from the incident. Approximately 5,940 gallons of fuel oil was reclaimed.
Approximately 25 yards of contaminated soil was excavated and is to be disposed of at a landfill site approved by the Michigan Department of Natural Resources.

Please let me know if you require further information.

Very truly yours,

MUELLER BRASS CO.



W. C. Roll
Director of Engineering and
Mueller Brass Co. Emergency
Coordinator

vlt

cc: MDNR
Coast Guard
St. Clair County Health Dept.
St. Clair County Emergency Services Coordinator
PIPP Committee
D. Mailander

STATE OF MICHIGAN



NATURAL RESOURCES COMMISSION

JACOB A. HOEFER
M. LAITALA
LARRY F. SNELL
PAUL H. WENDLER
HARRY H. WHITELEY

James J. Blanchard, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING
BOX 30028
LANSING, MI 48909
HOWARD A. TANNER, Director

Groundwater Quality Division
Detroit District Office
1120 S. State Fair Ave.
Detroit, MI 48203
(313) 368-3335

August 29, 1983

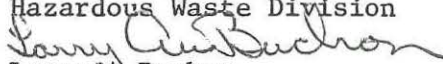
William Roll
Mueller Brass Co.
1925 Lapeer Ave.
Port Huron, MI 48060

EPA ID No: MID 005357504

Dear Mr. Roll

This letter is to acknowledge receipt of your letter dated August 17, 1983 indicating your compliance program for RCRA deficiencies cited during my inspection on August 1, 1983. I consider your response acceptable at this time and will evaluate the adequacy of your program during future inspections.

Thank you for your cooperation. If you have questions regarding Hazardous Waste Management please feel free to contact me at (313) 368-3335.

Sincerely,
Hazardous Waste Division

Larry AuBuchon
Detroit District Office

cc: J. Bohursky
K. Burda
EPA

M U E L L E R B R A S S C O .

P O R T H U R O N , M I C H I G A N 4 8 0 6 0



A r e a C o d e 3 1 3

T e l : 9 8 7 - 4 0 0 0

August 17, 1983

Michigan Department of Natural Resources
Hazardous Waste Division
Detroit District Office
1120 W. State Fair Ave.
Detroit, Michigan 48203

Attention: Mr. Larry AuBuchon

Reference: Your letter of August 8, 1983 -
RCRA Violation for Facility
EPA ID No. MID 005357504

Dear Mr. AuBuchon:

The intent of this letter is to confirm that the violation listed in the subject letter concerning the point of departure for international shipment of hazardous waste will be corrected as follows.

Manifests for all future international shipments of hazardous waste will list the specific point of departure as required in 40 CFR 262.50 (3) (ii).

As an example, manifest for hazardous waste exported to Tricil Limited, Canada will list the point of departure at Port Huron, Michigan via the Blue Water Bridge.

If you have any questions, please feel free to contact my office.

Very truly yours,

MUELLER BRASS Co.

Robert B. Mancini for
W. C. Roll,
Director of Engineering

RBM/vlt

cc: R. M. Rompala
D. G. Mason
C. L. Otis

RECEIVED

AUG 18 1983

GQD-DETROIT DIST.

STATE OF MICHIGAN



James J. Blanchard, Governor

DEPARTMENT OF NATURAL RESOURCES

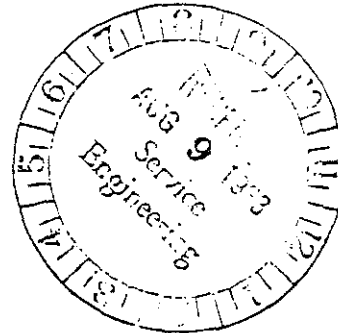
STEVENS T MASON BUILDING
BOX 30028
LANSING, MI 48909

August 8, 1983

Hazardous Waste Division
Detroit District Office
1120 W. State Fair Ave.
Detroit, MI 48203
(313) 368-3335

NATURAL RESOURCES COMMISSION

ALAN H. HOFFER
ALAN H. HOFFER
ALAN H. HOFFER
ALAN H. HOFFER
ALAN H. HOFFER



William Roll
Mueller Brass Co.
1925 Lapeer Ave.
Port Huron, MI 48060

EPA ID No: MID 005357504

Dear Mr. Roll:

On August 1, 1983, I conducted an inspection of your facility located at 1925 Lapeer Ave., Port Huron, MI to evaluate compliance of that facility with the requirements of subtitle C of the Resource Conservation and Recovery Act (RCRA) as amended.

As a result of that inspection, it has been determined that the above facility is in violation of the requirements of subtitle C of RCRA. Specifically, the following was found:

1. The international shipment of wastes did not have the point of departure listed on the manifests as required in 40 CFR 262.50(3)(ii).

You are requested to respond to this letter by August 22, 1983 providing documentation to this office regarding those actions taken to correct these violations. Please send your response to the address in the upper right corner of this letter.

If you have any questions regarding this matter, please feel free to contact me at (313) 368-3335.

Sincerely,
HAZARDOUS WASTE DIVISION

Larry AuBuchon
DETROIT DISTRICT OFFICE

LA:pf
Enclosure

cc: J. Bohunsky
EPA
K. Burda

RCRA Inspection Report

TP Identification Number: N I D 0 0 5 3 5 7 5 0 4

Installation Name: Mueller Brass Co.

Location Address: 1925 Lapeer

City: Port Huron State: MI

Date of inspection: 8/1/83 Time of inspection (from) 0930 (to) 1100

Person(s) interviewed	Title	Telephone
<u>Robert Mancini</u>	<u>Project Engineer</u>	<u>(313) 987-4000</u>

Inspector(s) Larry A. Bucher Agency/Title MDNR/HWD/WQS Telephone (313) 368-3335

<u>Installation Activity</u> (mark only one box)	<u>Inspection Form(s)</u>
--	---------------------------

- | | | |
|---------------------------------------|---|------|
| <input type="checkbox"/> II | Treatment/Storage/Disposal per 40 CFR 265.1 and/or Generation and/or Transportation | A |
| <input type="checkbox"/> II | Treatment/Storage/Disposal (no generation or Transportation) | A |
| <input type="checkbox"/> II | Generation and Transportation | B, C |
| <input checked="" type="checkbox"/> X | Generation only | B |
| <input type="checkbox"/> II | Transportation only | C |

cc: EPA
Company
K. Burda
J. Bohunsky

INSPECTION FORM B

Section A: Scope of inspection

Standards for generators of HAZARDOUS WASTE subject to 40 CFR 262.10

Section B: MANIFEST REQUIREMENTS (Part 262, Subpart B)

	Yes	No	NI*	Remarks
(1) Does the generator have copies of the manifest available for review? 262.40	<u>X</u>			
(2) Examine manifests for shipments in past 6 months. Indicate approximate number of manifested shipments during that period. <u>25</u>				
(3) Do the manifest forms examined contain the following information? (If possible, make 262.21 copies of, or record information from, manifests that do not contain the critical elements)				
a. Manifest document number?	<u>X</u>			
b. Name, mailing address, telephone number, and EPA ID number of generator?	<u>X</u>			
c. Name and EPA ID number of transporter(s)?	<u>X</u>			
d. Name, Address, and EPA ID Number of designated permitted facility and alternate facility?	<u>X</u>			
e. The description of the waste(s) (DOT shipping name, DOT hazard class, DOT identification number)?	<u>X</u>			
f. The total quantity of waste(s) and the type and number of containers loaded?	<u>X</u>			
g. Required certification?	<u>X</u>			
h. Required signatures?	<u>X</u>			
(4) Reportable exceptions 262.42				
a. For manifests examined in (2) (except for shipments within the last 35 days), enter the number of manifests for which the generator has <u>NOT</u> received a signed copy from the designated facility within 35 days of the date of shipment. <u>0</u>				
b. For manifests indicated in (4a), enter the number for which the generator has submitted exception reports (40 CFR 262.42) to the Regional Administrator. <u>0</u>				

Section C - PRE-TRANSPORT REQUIREMENTS
(40 CFR Part 262 Subpart C)

	Yes	No	NI	Remarks
(1) Is waste packaged in accordance with DOT regulations? (Required prior to movement of hazardous waste off-site) 262.30	<u>X</u>	___	___	_____
(2) Are waste packages marked and labeled in accordance with DOT regulations concerning hazardous waste materials? (Required prior to movement of hazardous waste off-site) 262.31 and 262.32	<u>X</u>	___	___	_____
(3) If required, are placards available to transporter? 262.33	___	___	___	<u>Transporter Provides</u>
(4) Pre-shipment Accumulation:				
applies only to GENERATORS that store hazardous waste on-site for 90 days or less without a permit. These items do not apply to generators whose waste is immediately transported off-site.				
a. Is hazardous waste accumulated in containers? If no, skip to b. 262.34	<u>X</u>	___	___	_____
i. Is each container clearly marked with the date on which the period of accumulation began?	<u>X</u>	___	___	_____
ii. Have more than 90 days elapsed since the dates marked?	___	<u>X</u>	___	_____
iii. Is each container labeled or marked clearly with the words "Hazardous Wastes?"	<u>X</u>	___	___	_____
iv. Are containers in good condition?	<u>X</u>	___	___	_____
v. Are containers compatible with waste in them?	<u>X</u>	___	___	_____
vi. Are containers managed to prevent leaks?	<u>X</u>	___	___	_____
vii. Are containers stored closed?	<u>X</u>	___	___	_____
viii. Are containers inspected weekly for leaks and defects?	<u>X</u>	___	___	_____
ix. Are ignitable and reactive wastes stored at least 15 meters (50 feet) from the facility property line? (Indicate if waste is ignitable or reactive).	___	___	___	<u>No ignitable/reactive wastes</u>

- ↓

- ix. Has the owner or operator observed the National Fire Protection Association's buffer zone requirements for tanks containing ignitable or reactive wastes?

Tank capacity: _____ gallons

Tank diameter: _____ feet

Distance of tank from property line _____ feet

(see tables 2-1 through 2-6 of NFPA's "Flammable and Combustible Liquids Code - 1977" to determine compliance.)

- c. Is hazardous waste accumulated in other than tanks or containers?

X _____ Baghouse dust
collected in bags
+ sold for reclaim

- d. Personnel training. 262.34 (a) 5

Do personnel training records include: 265.16

- i. Job Titles? X _____
- ii. Job Descriptions? X _____
- iii. Description of training? X _____ consolidate program
- iv. Records of training? X _____
- v. Did personnel receive the required training by 5-19-81? X _____
- vi. Do new personnel receive required training within six months? X _____
- vii. Do personnel training records indicate that personnel have taken part in an annual review of initial training? X _____

- e. Preparedness and Prevention 265. Subpart C

- i. Maintenance and Operation of Facility:

Is there any evidence of fire, explosion, or release of hazardous waste or hazardous waste constituent? 265.31

X X _____

- ii. If required, does this facility have the following equipment: 265.32

Internal communications or alarm systems?	<u>X</u>	___	___	___
Telephone or 2-way Radios at the scene of operations?	<u>X</u>	___	___	___
Portable fire extinguishers, fire control, spill control equipment and decontamination equipment?	<u>X</u>	___	___	___

Indicate the volume of water and/or foam available for fire control.

- iii. Testing and Maintenance of Emergency Equipment: 265.33

Has the owner or operator established testing and maintenance procedures for emergency equipment?	<u>X</u>	___	___	___
---	----------	-----	-----	-----

Is emergency equipment maintained in operable condition?	<u>X</u>	___	___	___
--	----------	-----	-----	-----

iv. Has owner/operator provided immediate access to internal alarms (if needed)?	<u>X</u>	___	___	___
--	----------	-----	-----	-----

v. Is there adequate aisle space for unobstructed movement?	<u>X</u>	___	___	___
---	----------	-----	-----	-----

vi. Has the owner or operator attempted to make arrangements with local authorities in case of an emergency at the facility?	<u>X</u>	___	___	___
--	----------	-----	-----	-----

- f. Contingency Plan and Emergency Procedures 265 Subpart D

Does the contingency plan contain the following information:

i. The actions facility personnel must take to comply with §265.51 and 265.56 in response to fires, explosions, or any unplanned release of hazardous waste? (If the owner has a Spill Prevention, Control and Countermeasures (SPCC) Plan, he needs only to amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this Part (as applicable.) 265.52	<u>X</u>	___	___	___
--	----------	-----	-----	-----

	Yes	No	NI	Remarks
ii. Arrangements agreed to by local police departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to §265.37?	<u>X</u>	—	—	—
iii. Names, addresses, and phone numbers (Office and Home) of all persons qualified to act as emergency coordinator.	<u>X</u>	—	—	—
iv. A list of all emergency equipment at the facility which includes the location and physical description of each item on the list, and a brief outline of its capabilities?	<u>X</u>	—	—	—
v. An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary? (This plan must describe signal(s) to be used to begin evacuation, evacuation routes and alternate evacuation routes?)	—	—	—	—
vi. Are copies of the Contingency Plan available at site and local emergency organizations?	<u>X</u>	—	—	—
vii. Is the facility emergency coordinator identified?	<u>X</u>	—	—	—
viii. Is coordinator familiar with all aspects of site operation and emergency procedures?	<u>X</u>	—	—	—
ix. Does the Emergency Coordinator have the authority to carry out the Contingency Plan?	<u>X</u>	—	—	—
x. If an emergency situation has occurred at this facility, has the emergency coordinator followed the emergency procedures listed in 265.56?	—	—	<u>X</u>	<u>none occurred at facility</u>

Section D: RECORDKEEPING AND REPORTING (Part 262, Subpart D)

Yes No NI Remarks

- (1) Are all test results and analyses needed for hazardous waste determinations retained for at least three years? 262.40

X _____

Section E: INTERNATIONAL SHIPMENTS (Part 262 Subpart E)
262.50

- (1) Has the installation imported or exported hazardous waste? If "no", skip a and b.

X _____

a. Exporting Hazardous Waste, has a generator:

- i. Notified the Administrator in writing?

X _____

- ii. Obtained the signature of the foreign consignee confirming delivery of the waste(s) in the foreign country?

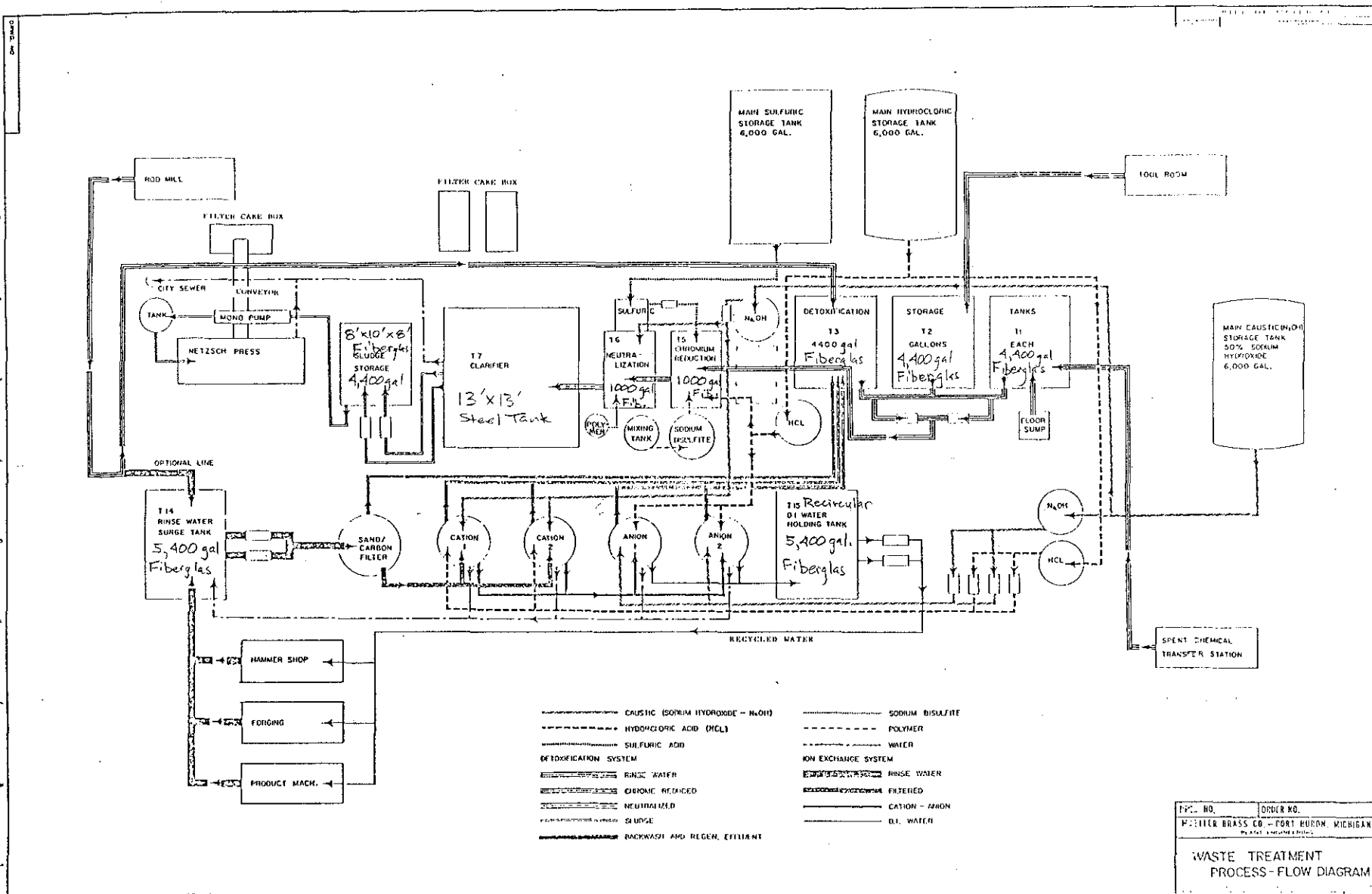
X _____

- iii. Met the Manifest requirements?

X* _____ No point of departure placed on manifest.

- b. Importing Hazardous Waste, has the generator met the manifest requirements?

_____ N/A _____



ADDENDUM I

Item X Existing Environmental Permits

1. Ion Exchange and Detoxification System. State
Certification No. F-562 (11/6/75) EPA Form 3300-3
2. Air Pollution Control - Michigan Permit No.

156-71 Chip Dryer
323-73 Coal-fired Boiler #6
213-74 Melting Furnace, AAF Baghouse
3-75 Melting Furnace, Slug Cast Baghouse
3-75 B Melting Furnace, Slug Cast Baghouse
revision - #10 Furnace.
240-79 Aerofall Mill

MUELLER BRASS CO.
Port Huron, Mich. 48060
EPA I.D. No. 005357512

M U E L L E R B R A S S C O .

P O R T H U R O N , M I C H I G A N 4 8 0 6 0



Area Code 313

Tel: 987-4000

November 12, 1982

Department of Natural Resources
Resource Recovery Division
Southeast Michigan Region
1120 W. State Fair Avenue
Detroit, Michigan 48203

Attention: Water Quality Specialist
Mr. Larry AuBuchon

Reference: Your Letter of September 13, 1982
Listing RCRA Violations

RECEIVED

NOV 15 1982

RESOURCE RECOVERY
S.E. MICHIGAN REGION
DIVISION OFFICE

Dear Mr. AuBuchon:

The intent of this letter is to confirm that the violations listed in the subject letter have been corrected.

Personnel training records have been compiled to include Job Titles, Job Descriptions and Annual Review Dates of Initial Training. MCo's Industrial Relations Department will maintain RCRA training records as shown in the attached memorandum of November 9, 1982.

We have also updated our facility Pollution Incident Prevention Plan and amended it to incorporate Hazardous Waste Management provisions.

In addition, a meeting was held on November 11, 1982 to review the Pollution Incident Prevention Plan with the City of Port Huron Emergency Services Director, Mr. Clifton Friedland, who is also the City Fire Marshall.

Arrangements have been made with Mr. Friedland to have copies of the Plan on file at the City Waste Water Treatment Plant, Fire Department, Police Department, Hospital and the Emergency Service Director's office.

Any questions you may have on the material herewith submitted should be directed to the writer at Ext. 602.

Very truly yours,

Robert B. Mancini

Robert B. Mancini, for
W. C. Roll

Director of Engineering

11/30/82

Response to DNR ltr dtd 9/13/82

Deficiencies corrected

P.A. B...

2 cc's - C. Riley

RBM/emg

enc/

cc: R. M. Rompala
C. L. Otis

NATURAL RESOURCES COMMISSION

JACOB A. HOEFER
CARL T. JOHNSON
M. LAITALA
MARY F. SNELL
HARRY H. WHITELEY
JOAN L. WOLFE
CHARLES G. YOUNGLOVE

STATE OF MICHIGAN



WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF NATURAL RESOURCES

HOWARD A. TANNER, Director
September 13, 1982

*Past Correspondence
noted by EPA
duplicate*

RECEIVED
BOX 99026
LANSING, MI 48203

Resource Recovery Division
Southeast MI Region
1120 W. State Fair
Detroit, MI 48203

William Roll
Mueller Brass Co.
1925 Lapeer Ave.
Port Huron, MI 48060

EPA ID No. MID 005357504

Dear Mr. Roll:

On September 10, 1982, I conducted an inspection of your facility located at 1925 Lapeer Ave., Port Huron, MI to evaluate compliance of that facility with requirements of subtitle C of the Resource Conservation and Recovery Act (RCRA) as amended.

As a result of that inspection, it has been determined that the above facility is in violation of the requirements of subtitle C of RCRA. Specifically, the following was found:

1. Personnel training records were not prepared as required in 40 CFR 265.16.
2. The contingency plan and emergency procedures were not prepared as required by 40 CFR Part 265, Subpart D.

You are requested to respond to this letter by October 28, 1982 providing documentation to this office regarding those actions taken to correct these violations. Please address your response to the address in the upper right corner of this letter.

If you have any questions regarding this matter, please feel free to contact me at (313) 368-3335.

Sincerely,
RESOURCE RECOVERY DIVISION

Larry AuBuchon
SOUTHEAST MICHIGAN REGION

LA:pf
Enclosure

cc: Al Howard, OHWM
EPA



RCRA Inspection Report

Identification Number: MI D 005357504

Installation Name: Mueller Brass Co

Location Address: 1925 Lapeer Ave

City: Port Huron State: MI

Date of inspection: 9/10/82 Time of inspection (from) 0830 (to) 1100

Person(s) interviewed	Title	Telephone
<u>Chuck Otis</u>	<u>Plant Engineer</u>	<u>(313) 987-4000</u>
<u>Bob Mancini</u>	<u>Project Engineer</u>	<u>↓</u>
<u>William Roll</u>	<u>Dir. of Eng.</u>	<u>↓</u>

Inspector(s)	Agency/Title	Telephone
<u>Larry A. Buchan</u>	<u>MDNR-RRD/Water Quality Spec</u>	<u>(313) 368-3335</u>

Installation Activity (mark only one box) Inspection Form(s)

- | | |
|--|------|
| <input type="checkbox"/> Treatment/Storage/Disposal per 40 CFR 265.1 and/or Generation and/or Transportation | A |
| <input type="checkbox"/> Treatment/Storage/Disposal (no generation or Transportation) | A |
| <input type="checkbox"/> Generation and Transportation | B, C |
| <input checked="" type="checkbox"/> Generation only | B |
| <input type="checkbox"/> Transportation only | C |

New Owner:
Sharon Steel
6917 Collins Ave.
Miami, Fla 33141

TCE waste reclaimed
 Baghouse dust reclaimed

tion A: Scope of inspection

Standards for generators of HAZARDOUS WASTE subject to 40 CFR 262.10

Section B: MANIFEST REQUIREMENTS (Part 262, Subpart B)

	Yes	No	N1*	Remarks
(1) Does the generator have copies of the manifest available for review? 262.40	<input checked="" type="checkbox"/>			
(2) Examine manifests for shipments in past 6 months. Indicate approximate number of manifested shipments during that period. <u>14</u>				
(3) Do the manifest forms examined contain the following information? (If possible, make 262.21 copies of, or record information from, manifests that do not contain the critical elements)				
a. Manifest document number?	<input checked="" type="checkbox"/>			
b. Name, mailing address, telephone number, and EPA ID number of generator?	<input checked="" type="checkbox"/>			
c. Name and EPA ID number of transporter(s)?	<input checked="" type="checkbox"/>			
d. Name, Address, and EPA ID Number of designated permitted facility and alternate facility?	<input checked="" type="checkbox"/>			
e. The description of the waste(s) (DOT shipping name, DOT hazard class, DOT identification number)?	<input checked="" type="checkbox"/>			
f. The total quantity of waste(s) and the type and number of containers loaded?	<input checked="" type="checkbox"/>			
g. Required certification?	<input checked="" type="checkbox"/>			
h. Required signatures?	<input checked="" type="checkbox"/>			
(4) Reportable exceptions 262.42				
a. For manifests examined in (2) (except for shipments within the last 35 days), enter the number of manifests for which the generator has NOT received a signed copy from the designated facility within 35 days of the date of shipment. <u>0</u>				
b. For manifests indicated in (4a), enter the number for which the generator has submitted exception reports (40 CFR 262.42) to the Regional Administrator. <u>0</u>				

	Yes	No	NI	Remarks
(1) Is waste packaged in accordance with DOT regulations? (Required prior to movement of hazardous waste off-site) 262.30	<u>X</u>	___	___	___
(2) Are waste packages marked and labeled in accordance with DOT regulations concerning hazardous waste materials? (Required prior to movement of hazardous waste off-site) 262.31 and 262.32	<u>X</u>	___	___	___
(3) If required, are placards available to transporter? 262.33	<u>X</u>	___	___	___

**** (4) Pre-shipment Accumulation:**

**** applies only to GENERATORS that store hazardous waste on-site for 90 days or less without a permit. These items do not apply to generators whose waste is immediately transported off-site.**

a. Is hazardous waste accumulated in containers? If no, skip to b. 262.34	<u>X</u>	___	___	___
i. Is each container clearly marked with the date on which the period of accumulation began?	<u>X</u>	___	___	___
ii. Have more than 90 days elapsed since the dates marked?	___	<u>X</u>	___	___
iii. Is each container labeled or marked clearly with the words "Hazardous Wastes?"	<u>X</u>	___	___	___
iv. Are containers in good condition?	<u>X</u>	___	___	___
v. Are containers compatible with waste in them?	<u>X</u>	___	___	___
vi. Are containers managed to prevent leaks?	<u>X</u>	___	___	___
vii. Are containers stored closed?	<u>X</u>	___	___	___
viii. Are containers inspected weekly for leaks and defects?	<u>X</u>	___	___	___
ix. Are ignitable and reactive wastes stored at least 15 meters (50 feet) from the facility property line? (Indicate if waste is ignitable or reactive).	___	___	___	<u>N/A</u>

- x. Are incompatible wastes stored in separate containers? (If not, the provisions of 40 CFR 265.17(b) apply.) X — — N/A
- xi. Are containers of incompatible waste separated or protected from each other by physical barriers or sufficient distance? — — — N/A
- b. Is hazardous waste accumulated in tanks?
If no, skip to c. 265.34 (January 11, 1982 revision)
- i. Is each tank labeled or marked clearly with the words "Hazardous Wastes"? 265.34 (January 1982 revision) — — — N/A
- ii. Are tanks used to store only those wastes which will not cause corrosion, leakage or premature failure of the tank? 265.192 — — — —
- iii. Do uncovered tanks have at least 60 cm (2 feet) of freeboard, or dikes or other containment structures? — — — —
- iv. Do continuous feed systems have a waste-feed cutoff? — — — —
- v. Are waste analyses done before the tanks are used to store a substantially different waste than before? 265.193 — — — —
- vi. Are required daily and weekly inspections done? 265.194 — — — —
- vii. Are reactive and ignitable wastes in tanks protected or rendered non-reactive or nonignitable? Indicate if waste is ignitable or reactive. (If waste is rendered non-reactive or nonignitable, see treatment requirements.) 265.198 — — — —
- viii. Are incompatible wastes stored in separate tanks? (If not, the provisions of 40 CFR §265.17(b) apply.) 265.199 — — — —

- ix. Has the owner or operator observed the National Fire Protection Association's buffer zone requirements for tanks containing ignitable or reactive wastes?

Tank capacity: _____ gallons

Tank diameter: _____ feet

Distance of tank from property line _____ feet

(see tables 2-1 through 2-6 of NFPA's "Flammable and Combustible Liquids Code - 1977" to determine compliance.)

- c. Is hazardous waste accumulated in other than tanks or containers?

X _____ Baghouse dust recycled in 1/1

- d. Personnel training. 262.34 (a) 5

Do personnel training records include: 265.16

- i. Job Titles? _____ X _____
 ii. Job Descriptions? _____ X _____
 iii. Description of training? _____ X _____
 iv. Records of training? _____ X _____
 v. Did personnel receive the required training by 5-19-81? _____ X _____
 vi. Do new personnel receive required training within six months? _____ X _____
 vii. Do personnel training records indicate that personnel have taken part in an annual review of initial training? _____ X _____

- e. Preparedness and Prevention 265. Subpart C

- i. Maintenance and Operation of Facility:

Is there any evidence of fire, explosion, or release of hazardous waste or hazardous waste constituent? 264.31

_____ X _____

ii. If required, does this facility have the following equipment: 264.32

Internal communications or alarm systems?	<u>X</u>	_____	_____	_____
Telephone or 2-way Radios at the scene of operations?	<u>X</u>	_____	_____	_____
Portable fire extinguishers, fire control, spill control equipment and decontamination equipment?	<u>X</u>	_____	_____	_____

Indicate the volume of water and/or foam available for fire control:

iii. Testing and Maintenance of Emergency Equipment: 264.33

Has the owner or operator established testing and maintenance procedures for emergency equipment?	<u>X</u>	_____	_____	_____
Is emergency equipment maintained in operable condition?	<u>X</u>	_____	_____	_____
iv. Has owner/operator provided immediate access to internal alarms (if needed)?	<u>X</u>	_____	_____	_____
v. Is there adequate aisle space for unobstructed movement?	<u>X</u>	_____	_____	_____
vi. Has the owner or operator attempted to make arrangements with local authorities in case of an emergency at the facility?	<u>X</u>	_____	_____	<u>not formal</u>

f. Contingency Plan and Emergency Procedures 265 Subpart D

Does the contingency plan contain the following information:

i. The actions facility personnel must take to comply with §265.51 and 265.56 in response to fires, explosions, or any unplanned release of hazardous waste? (If the owner has a Spill Prevention, Control and Countermeasures (SPCC) Plan, he needs only to amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this Part (as applicable.) 265.52

Facility plan needs to be amended

_____ X _____

	Yes	No	NI	Remarks
ii. Arrangements agreed to by local police departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to §265.37?	<u>X</u>			
iii. Names, addresses, and phone numbers (Office and Home) of all persons qualified to act as emergency coordinator.	<u>X</u>			
iv. A list of all emergency equipment at the facility which includes the location and physical description of each item on the list, and a brief outline of its capabilities?	<u>X</u>			<u>has list only</u>
v. An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary? (This plan must describe signal(s) to be used to begin evacuation, evacuation routes and alternate evacuation routes?)	<u>X</u>			
vi. Are copies of the Contingency Plan available at site and local emergency organizations?	<u>X</u>			
vii. Is the facility emergency coordinator identified?	<u>X</u>			<u>needs update</u>
viii. Is coordinator familiar with all aspects of site operation and emergency procedures?	<u>X</u>			
ix. Does the Emergency Coordinator have the authority to carry out the Contingency Plan?	<u>X</u>			
x. If an emergency situation has occurred at this facility, has the emergency coordinator followed the emergency procedures listed in 265.56?				<u>N/A</u>

Section D: RECORDKEEPING AND REPORTING (Part 262, Subpart D)

Yes No NI Remarks

- (1) Are all test results and analyses needed for hazardous waste determinations retained for at least three years? 262.40

X _____

Section E: INTERNATIONAL SHIPMENTS (Part 262 Subpart E)
262.50

- (1) Has the installation imported or exported hazardous waste? If "no", skip a and b.

_____ X _____

a. Exporting Hazardous Waste, has a generator:

i. Notified the Administrator in writing?

_____ _____

ii. Obtained the signature of the foreign consignee confirming delivery of the waste(s) in the foreign country?

_____ _____

iii. Met the Manifest requirements?

_____ _____

b. Importing Hazardous Waste, has the generator met the manifest requirements?

_____ _____

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

August 31, 1981

RECEIVED

SEP 04 1981

TO: Office of Hazardous Waste Management

FROM: Chuck Bikfalvy, Water Quality Division, District One

SUBJECT: Mueller Brass Company - Port Huron - RCRA Inspection

On August 27, 1981 I conducted a RCRA inspection at the subject facility, EPA I.D. # MID00535704. The company had notified EPA of its TSD status November 19, 1980.

I contacted Mr. William Roll, Director of Engineering, who referred me to Mr. Robert Mancini, Project Engineer. Mr. Mancini is most familiar with the hazardous waste program at the plant and remained with me during the entire inspection. Mr. Roll was present during most of the meeting, with Mr. Elli Wefel joining us for part of the discussion. Mr. Wefel had developed the list of hazardous wastes reported to EPA.

The company manufactures copper alloy rod, tube, and parts. Pickling and electroplating operations result in wastewaters which are pumped or transferred by portable tank to their wastewater treatment building, known as Building 25. The treatment plant consists of an ion-exchange side and a detoxification (wet chemistry) side. The ion exchange side generates deionized water which is recirculated and waste which is sent to the detox side. Treatment in the detox side includes reduction, pH adjustment, and sludge dewatering. Treated effluent is discharged to the City of Port Huron Sanitary system. Sludge is dewatered in a filter press. This metallic sludge is one of the two principal hazardous wastes produced at the plant. The sludge has passed the EP toxicity analysis, but is handled as a hazardous waste and manifested to Wayne Disposal.

The second principal hazardous waste is baghouse dust which is EP toxic with respect to lead and cadmium. This dust is presently being accumulated in

cardboard containers pending resale for recovery of metals. A buyer has been found in South Carolina. The buyer has a Federal ID number. South Carolina manifests have been obtained, since the State of South Carolina requires their use. (Michigan will not regulate this material under Act 64, since it is being resold for net positive payment). Shipment will be by rail, using a transporter ID number already supplied by the railroad. Accumulation thus far has been for less than 90 days. Containers are properly marked with the start of accumulation date.

Other wastes listed, according to Mr. Wefel, are actually not being generated by the company. They were listed because those products are present at the plant and could become wastes in the event of a spill.

Closure has not been addressed by the company. This was explained as an oversight that Mr. Mancini indicated he would take immediate steps to correct.

Inspections are a continuous part of operations at the plant and inspection observations are included in an operating log. There is no inspection log per se, although inspection requirements are being met otherwise. I advised Mr. Mancini to take this requirement more literally. He intends to do so.

Section J. (tanks) of the attached report pertains to a portable tank used not for storage but for transferring spent liquid wastes from use areas in the plant to building 25.

CB/jmg

cc: John Bonunsky/WQD Files

RCCA INSPECTION REPORT - INTERIM STATUS STANDARDS
TREATMENT, STORAGE, AND DISPOSAL FACILITIES
Form A - General Facility Standards

122.7(i)

I. General Information:
(265.74)

- (A) Facility Name: MUELLER BRASS CO.
(b) Street: 1925 LAPEER AVE
(c) City: PORT HURON (D) State: MICH. (E) Zip Code: 48060
(F) Phone: (313) 987-4000 (G) County: ST. CLAIR
(H) Operator: MUELLER BRASS CO.
(I) Street: 1925 LAPEER AVE.
(J) City: PORT HURON (K) State: MICH. (L) Zip Code: 48060
(M) Phone: (313) 987-4000 (N) County: ST. CLAIR
(O) Owner: SHARON STEEL
(P) Street: 6917 COLLINS AVE.
(Q) City: MIAMI BEACH (R) State: FLORIDA (S) Zip Code: 33141
(T) Phone: (305) 866-7771 (U) County: DADE
(V) Date of Inspection: AUG 27 (W) Time of Inspection (From) 9:10 (To) 4:20
(X) Weather Conditions: OVERCAST, INTERMITTENT RAIN

(Y) Person(s) Interviewed	Title	Telephone
<u>WM ROLL</u>	<u>DIR. OF ENG.</u>	<u>(313) 987-4000</u>
<u>ROBT. MANCINI</u>	<u>PROJECT ENG.</u>	<u>(313) 987-4000</u>
<u>ELLI WEFEL</u>	<u>CONSULTANT</u>	<u>(313) 987-4000</u>
(Z) Inspection Participants	Agency/Title	Telephone
<u>C. BIKFALVY</u>	<u>MICH. DNR</u>	<u>(313) 379-9692</u>
(AA) Preparer Information		
Name	Agency/Title	Telephone
<u>C. BIKFALVY</u>	<u>MICH. DNR</u>	<u>(313) 379-9692</u>

II. SITE ACTIVITY:

Complete sections I through VII for all treatment, storage, and/or disposal facilities. Complete the forms (in parenthesis) in section VIII corresponding to the site activities identified below:

- | | |
|---|---|
| <input checked="" type="checkbox"/> A. Storage and/or Treatment | <input type="checkbox"/> D. Incineration and/or Thermal Treatment |
| 1. Containers (I) | (O and P) |
| 2. Tanks (J) | |
| 3. Surface Impoundments (K) | <input checked="" type="checkbox"/> E. Chemical, Physical, and Biological |
| 4. Waste Piles (L) | Treatment (Q) |
| <input type="checkbox"/> B. Lago Treatment (M) | |
| <input type="checkbox"/> C. Landfills (N) | |

Note: If facility is also a generator or transporter of hazardous waste complete sections IX and X of this form as appropriate.

ALSO GENERATOR

III. GENERAL FACILITY STANDARDS:
(Part 265 Subpart B)

	Yes	No	NI*	Remark
(a) Has the Regional Administrator been notified regarding:				
1. Receipt of hazardous waste from a foreign source? 265.12(a)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NONE RECEIVED
2. Facility expansion? 122.23(b)2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NO EXPANSION
(b) General Waste Analysis:				
1. Has the owner or operator obtained a detailed chemical and physical analysis of the waste? 265.13(a)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Does the owner or operator have detailed waste analysis plan on file at the facility? 265.13(b)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Does the waste analysis plan specify procedures for inspection and analysis of each movement of hazardous waste from off-site? 265.13(c)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FILTER CAKE FROM WASTE-WATER TREATMENT PLANT HAS BEEN ANALYSED FOR EP TOXICITY, PASSED. STILL COMPANY TREATS IT AS A HAZARDOUS WASTE AND DOES NOT ANALYZE EACH LOAD
(c) Security - Do security measures include: (if applicable) 265.14				
1. 24-Hour surveillance? 265.14(b)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Artificial or natural barrier around facility? 265.14(b)2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FENCES
3. Controlled entry? 265.14(b)2ii	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Danger sign(s) at entrance? 265.14(c)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(D) Do Owner or Operator Inspections Include:				
265.15				
1. Records of malfunctions? 265.15(a)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LOG MAINTAINED
2. Records of operator error? 265.15(a)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	" "
3. Records of discharges? 265.15(a)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not Inspected

265 Subpart B

	Yes	No	NI	Remarks
4. Inspection schedule: 265.15(a)4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SEE COVER MEMO CONTINUOUS DURING OPERATION OF TREATMENT PLANT / PLANT SECURITY OTHERWISE
5. Safety, emergency equipment? 265.15(b)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Security devices? 265.15(b)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Operating and structural devices? 265.15(b)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Inspection log? 265.15(d)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	OPERATING LOG INCLUDES ANY PROBLEMS NOTED
(E) Do personnel training records include: (Effective 5/19/81) 265.16(d)				
1. Job Titles?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ON FILE IN PERSONNEL
2. Job Descriptions?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	" " " "
3. Description of Training?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Records of Training?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Have facility personnel received required training by 5-19-81?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Do new personnel receive required training within six months?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(F) If required are the following special requirements for ignitable, reactive, or incompatible wastes addressed?				
1. ^{265.17} Special handling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	THEY HAVE NONE.
2. No smoking signs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
3. Separation and protection from ignition sources?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA

*Not Inspected

IV. PREPAREDNESS AND PREVENTION:
(Part 265 Subpart C)

Maintenance and Operation
of Facility:

1. Is there any evidence of fire, explosion, or release of hazardous waste or hazardous waste constituent?

✓

265.31

- (b) If required, does the Facility have the Following Equipment:

265.32

1. Internal communications or alarm systems?

✓

TELEPHONE, PLANT
SECURITY RADIOS

2. Telephone or 2-way Radios at the scene of operations?

✓

TELEPHONE

3. Portable fire extinguishers, fire control, spill control equipment and decontamination equipment?

✓

FIRE EQUIPMENT
ABSORBENTS, SAND BAGS
TOOLS, SODA ASH FOR ACID
SPILLS, EYE WASH STATIONS
+ SHOWERS

265.32(c)

Indicate the volume of water and/or foam available for fire control:

265.32(d)

Units: FIRE DEPT. WITHIN PLANT, CHIEF, FIRE TRUCK

NOTE - WASTE IS NOT IGNITABLE WASTE

- (C) Testing and Maintenance of
Emergency Equipment:

265.33 Recordkeeping required under 265.15(b)1

1. Has the Owner or Operator established Testing and Maintenance Procedures for Emergency Equipment?

✓

2. Is Emergency Equipment Maintained in Operable Conditions?

✓

- (D) Has Owner or Operator Provided Immediate Access to Internal Alarms? (if needed)

✓

265.34

*Not Inspected

(+) Is there adequate aisle space
for unobstructed movement?

265.35

V. CONTINGENCY PLAN AND EMERGENCY PROCEDURES:
(Part 265 Subpart D)

HAVE PIPP, IN PROCESS OF UPDATING

(A) Does the contingency Plan contain the
following information:

Yes No NI* Remarks

1. The actions facility personnel
must take to comply with
§265.51 and 265.56 in response
to fires, explosions, or any
unplanned release of hazardous
waste? (If the owner has a Spill
Prevention, Control, and Counter-
measures (SPCC) Plan, he needs
only to amend that plan to
incorporate hazardous waste
management provisions that are
sufficient to comply with the
requirements of this Part (as
applicable.)

2. Arrangements agreed to by local
police departments, fire departments
hospitals, contractors, and State
and local emergency response teams
to coordinate emergency services
pursuant to §265.37?

3. Names, addresses, and phone
numbers (office and home) of all
persons qualified to act as
emergency coordinators?

265.52(d)

4. A list of all emergency equipment
at the facility which includes the
location and physical description
of each item on the list and a
brief outline of its capabilities?

265.52(e)

5. An evacuation plan for facility
personnel where there is a possibility
that evacuation could be necessary?
(This plan must describe signal(s)
to be used to begin evacuation,
evacuation routes, and alternate
evacuation routes?)

265.52(f)

*Not Inspected

*CALL LIST IN
PIPP*

ALSO, BEING UPDATED

*THERE IS AN EVACUAT
PLAN IN DEVELOPMENT*

*ROUTES ARE INDICATED.
SIGNALS NOT SPELLED
OUT.*

V. CONTINGENCY PLAN AND EMERGENCY PROCEDURES - Continued
265 Subpart D

	Yes	No	NI*	Remarks
Are copies of the Contingency Plan Available at Site and local Emergency Organizations? 265.53				CITY WWTP HAS LIST OF CO. EMERGENCY EQUIPMENT, DNR HAS PIPP
(C) Emergency Coordinator 265.55				
1. Is the facility Emergency Coordinator identified?	✓			
2. Is coordinator familiar with all aspects of site operation and emergency procedures?	✓			KNOWS WHO TO CALL
3. Does the Emergency Coordinator have the authority to carry out the Contingency Plan?	✓			
(D) Emergency Procedures				
If an emergency situation has occurred at this facility, has the Emergency Coordinator followed the emergency procedures listed in 265.56?			✓	N/A - HAVE BEEN NO EMERGENCIES

VI. MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING
(Part 265 Subpart E)

	Yes	No	NI*	Remarks
(A) Use of Manifest System				
1. Does the facility follow the procedures listed in §265.71 for processing each Manifest?	✓			
2. Are records of past shipments retained for 3 years 265.71(5)	✓			HAS NOT BEEN 3 YEARS YET BUT BEING RETAINED
(B) Does the owner or operator meet requirements regarding Manifest Discrepancies? 265.72	✓			NO DISCREPANCIES YET

*not Inspected

(C) Operating Record
265.73

1. Does the owner or operator maintain an operating record as required in 265.73?

✓

LOG IN WASTE
TREATMENT PLANT

2. Does the operating record contain the following information:

- **b. The method(s) and date(s) of each wastes treatment, storage, or disposal as required in Appendix I?

✓

- c. The location and quantity of each hazardous waste within the facility?

✓

INCLUDED IN P. PP

- ***d. A map or diagram of each cell or disposal area showing the location and quantity of each hazardous waste? (This information should be cross-referenced to specific manifest numbers if waste was accompanied by a manifest.)

NA

- e. Records and results of all waste analyses, trial tests, monitoring data, and operator inspections?

✓

- f. Reports detailing all incidents that required implementation of the contingency plan?

NA

NA

NONE OCCURRED

- g. All closure and past closure costs as applicable? (Effective 5-19-81)

✓

NO CLOSURE ESTIMATES
MADE

** See page 33252 of the May 19, 1980, Federal Register.

*** Only applies to disposal facilities

III. CLOSURE AND POST CLOSURE
(Part 265 Subpart G)

	Yes	No	NI*	Remarks
(A) Closure and Post Closure				SEE COVER MEMO
1. Closure Plan Available for Inspection by May 19, 1981? 265.112(a)	<input checked="" type="checkbox"/>			
2. Has this plan been submitted to the Regional Administrator 265.112(c)	<input checked="" type="checkbox"/>			
3. Has Closure begun? 265.112(c)	<input checked="" type="checkbox"/>			
4. Is closure estimate available by May 19, 1981? 265.142	<input checked="" type="checkbox"/>			
(B) Post Closure Care and Use of Property				
Has the Owner or Operator supplied a Post Closure Monitoring Plan (by May 19, 1981)? 265.117	<input checked="" type="checkbox"/>			

IX. FACILITY STANDARDS
(Part 265, Subparts I thru R)

I
USE AND MANAGEMENT OF CONTAINERS

Facility Name: MUELLER BRASS CO. Date of Inspection: AUG 27, 1981

	Yes	No	NI*	Remarks
1. Are containers in good condition? 265.171	<input checked="" type="checkbox"/>			
2. Are containers compatible with waste in them? 265.172	<input checked="" type="checkbox"/>			
3. Are containers stored closed? 265.173(a)	<input checked="" type="checkbox"/>			WILL BE COVERED FOR SHIPMENT STORAGE IS UNDER ROOF.
4. Are containers managed to prevent leaks? 265.173(b)	<input checked="" type="checkbox"/>			PROTECTED FROM WEATHER & STORED IN DOORS
5. Are containers inspected weekly for leaks and defects? 265.174	<input checked="" type="checkbox"/>			DAILY
6. Are ignitable & reactive wastes stored at least 15 meters (50 feet) from the facility property line? 265.176				Indicate if waste is: <input type="checkbox"/> Ignitable, <input type="checkbox"/> Reactive NA - NOT IGNITABLE OR REACTIVE

*Not Inspected

Yes No NI* Remarks

7. Are incompatible wastes stored in separate containers? (If not, the provisions of 40 CFR 265.17(b) apply.)

NA

265.177(a)

8. Are containers of incompatible wastes separated or protected from each other physical barriers or sufficient distance?

NA

265.177(c)

J
TANKS

Facility Name: MUELLER BRASS CO

Date of Inspection: AUG 27, 1981

1. Are tanks used to store only those wastes which will not cause corrosion, leakage or premature failure of the tank? ✓

265.192(b)

2. Do uncovered tanks have at least 60 cm (2 feet) of freeboard, or dikes or other containment structures?

NA - TANK IS PORTABLE,
COVERED

265.192(c)

3. Do continuous feed systems have a waste-feed cutoff?

NA

265.192(d)

4. Are waste analyses done before the tanks are used to store a substantially different waste than before?

NA

265.193(a)

5. Are required daily and weekly inspections done? ✓

265.194

6. Are reactive & ignitable wastes in tanks protected or rendered non-reactive or non-ignitable? (If waste is rendered non-reactive or non-ignitable, see treatment requirements.)

Indicate if waste is: ☐ Ignitable

☐ Reactive

NA

265.198, 265.17

7. Are incompatible waste stored in separate tanks? (If not, the provisions of 40 CFR 265.17(b) apply.)

NA

265.199

8. Has the owner or operator observed the National Fire Protection Associations buffer zone requirements for tanks containing ignitable or reactive wastes?

Tank capacity: _____ gallons

Tank diameter: _____ feet

Distance of tank from property line _____ feet

(See table 2 - 1 through 2 - 6 of NRPA's "Flammable and Combustible Code - 1977" to determine compliance.)

K
SURFACE IMPOUNDMENTS

NA

Facility Name: _____

Date of Inspection: _____

1. Do surface impoundments have at least 60 cm (2 feet) of freeboard?

265.222

2. Do earthen dikes have protective covers?

265.223

3. Are waste analyses done when the impoundment is used to store a substantially different waste than before?

265.225(a)

4. Is the freeboard level inspected at least daily?

265.226(a)1

5. Are the dikes inspected weekly for evidence of leaks or deterioration?

265.226(a)2

6. Are reactive & ignitable wastes rendered non-reactive or non-ignitable before storage in a surface impoundment? (If waste is rendered non-reactive or non-ignitable, see treatment requirements.)

265.299(a)1

7. Are incompatible wastes stored in different impoundments? (If not, the provisions of 40 CFR 265.17(b) apply.)

265.230

WASTE PILES

Facility Name: MUELLER BRASS CO.

Date of Inspection: AUG-27, 1981

	Yes	No	NI*	Remarks
1. Are waste piles covered or protected from the wind? 265.251	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>ROOF OVER PILE, WET SLUDGE</u>
2. Is each in-coming movement of waste analyzed before being added to the waste pile? 265.252	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>INCOMING RAW WASTE IS ANALYZED BEFORE TREATMENT - SLUDGE IS NOT, BUT IS REGARDED AS HAZARDOUS</u>
3. Are leachate, run-off, and run-on controlled? (The effective date of this provision is Nov. 19, 1981.) 265.253	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Are reactive & ignitable wastes rendered non-reactive or non-ignitable before storage in a pile? (If waste is rendered non-reactive or non-ignitable, see treatment requirements.) 265.256(a)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Indicate if waste is: <input type="checkbox"/> Ignitable, <input type="checkbox"/> Reactive <u>SLUDGE IS NON-REACTIVE & NON-IGNITABLE</u>
5. Are piles of reactive or ignitable waste protected? 265.256(a)2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>
6. Are incompatible wastes stored in different piles? (If not, the provisions of 40 CFR 265.17(b) apply.) 265.257(a)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u> } <u>NO INCOMPATIBLE WASTES</u>
7. Are piles of incompatible waste protected by barriers or distance from other waste? 265.257(b)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>

LAND TREATMENT

ility Name: _____ Date of Inspection: _____

1. Is hazardous waste ^{treated} capable of biological or chemical degradation? _____
2. 265.272(a)
Are run-off and run-on diverted from the facility or collected (Effective date: November 19, 1981)? _____
3. 265.272(b & c)
Is waste analyzed according to 265.273? _____
4. 265.13
If food chain crops are grown at the facility, has the owner or operator addressed the requirements of 265.276? _____
5. Is an unsaturated zone monitoring plan designed and implemented to detect the vertical migration of hazardous waste and provide information on the background concentrations of the hazardous waste available? _____
6. 265.278(a)
Does the unsaturated zone monitoring plan address the minimum information specified in 265.278? _____
7. *Are records kept regarding application dates, and rates, quantities, and locations of all hazardous waste placed in the facility?* _____
8. 265.279
Are the special requirements fulfilled regarding land treatment of ignitable or reactive wastes? *Indicate if waste is: ☐ Ignitable ☐ Reactive* _____
9. 265.281
Are incompatible wastes land treated? (If yes, 265.17(b) applies) _____
265.282

*Not Inspected

N
LANDFILLS

NA

Facility Name: _____ Date of Inspection: _____

Yes No NI* Remarks

(A) General Operating Requirements

Does the facility provide the following:

- **1. Diversion of run-on away from active portions of the fill?
265.302(a)
- **2. Collection of run-off from active portions of the fill?
265.302(b)
- **3. Is collected run off treated?
265.302(b)
- 4. Control of wind disposal of hazardous waste?
265.302(d)

(**Effective 11-19-81)

(B) Surveying and Recordkeeping

Does the Operating Record Include:

- 1. A map showing the exact location and dimensions of each cell?
265.309(a)
- 2. The contents of each cell and the location of each hazardous waste type within each cell?
265.309(b)

(C) Closure and Post-Closure

- 1. Is the Closure Plan available for inspection by 5-19-81?
265.112(a)
- 2. Has this plan been submitted to the Regional Administrator?
265.112(c)
- 3. Has Closure begun?
265.112(c)
- 4. Is Closure cost estimate available by 5-19-81?
265.142(a)

(D) Special requirements ^{for} ignitable or reactive waste

Are ignitable or reactive wastes treated so the resulting mixture is no longer ignitable or reactive?

265.312

	Yes	No	NI*	Remarks
(If waste is rendered non-reactive or non-ignitable see treatment requirements)				
If not, the provisions of 40 CFR 265.17(b) apply.	_____	_____	_____	_____
(E) Special requirements for Incompatible Wastes.				
Does the owner or operator dispose of incompatible wastes in separate cells?	_____	_____	_____	_____
265.313				
If not, the provisions of 40 CFR 265.17(b) apply.	_____	_____	_____	_____
(F) Special requirements for liquid waste (effective 11-19-81)				
1. Are bulk or non-containerized liquids placed in the landfill?	_____	_____	_____	_____
265.314(a)				
2. Does the landfill have a chemically and physically resistant liner system?	_____	_____	_____	_____
265.314(a)1				
3. Does the landfill have a functional leachate collection system?	_____	_____	_____	_____
265.314(a)1				
4. Are free liquids stabilized prior to or immediately after placement in the landfill?	_____	_____	_____	_____
265.314(a)2				
(G) Special requirements for Containers (effective 11-19-81)				
Are empty containers crushed flat, shredded, or similarly reduced in volume before being buried beneath the surface of the landfill?	_____	_____	_____	_____
265.315(a)				

*Not Inspected

0 and P
INCINERATION and THERMAL TREATMENT

(*) Facility Name: _____

, , Date of Inspection: _____

I. Determination of Steady State

A. Type of unit (i.e., type of incinerator or thermal treatment): _____

B. Components and steady state condition: I 265.343 Th 265.373

**** Was this component at SS prior to adding waste?

Component	Yes	No	NI*	Remarks
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____

II. Waste Analysis

265.13

A. Minimum requirements, for wastes not previously burned/treated.

1. Required analyses; has an analysis been performed for the following: I 265.345 Th 265.375	Yes	No	NI*	Remarks
a. Heating value	_____	_____	_____	_____
b. Halogen content	_____	_____	_____	_____
c. Sulfur content	_____	_____	_____	_____

*Not Inspected

2. Documented, written data may be substituted for analysis for these. Are either present for: I 265.345 Th 265.375

a. Load? _____

b. Mercury? _____

- B. Other parameters for which the waste is tested to enable owner or operator to establish steady state or determine the types of pollutants which may be emitted. (Note in Remarks any which you feel should be tested for.)

Remarks

1. _____
2. _____
3. _____
4. _____
5. _____

III. Monitoring and Inspections

	Yes	No	NI*	Remarks
A. Combustion/emission control instruments monitored at least every 15 minutes. I 265.345(a)1 Th 265.377(a)1	_____	_____	_____	_____
B. Steady state maintained or corrections attempted? I 265.347(a)1 Th 265.377(a)1	_____	_____	_____	_____
C. Stack Plume observed at least hourly for normal color and opacity? I 265.347(a)2 Th 265.377(a)2	_____	_____	_____	_____
D. Did any stack observations made by owner or operator show a plume different than normal? ** I 265.347(a)2 Th 265.377(a)2	_____	_____	_____	_____
E. If yes to D above, were corrections made to return emissions to normal appearance? ** I 265.347(a)2 Th 265.377(a)2	_____	_____	_____	_____
F. Complete unit and associated equipment inspected daily for leaks, spills, and fugitive emissions? I 265.347(a)3 Th 265.377(a)3	_____	_____	_____	_____
G. Emergency shutdown controls, system alarms checked daily for proper operation? I 265.347(a)3 Th 265.377(a)3	_____	_____	_____	_____

*Not Inspected

Specify in Remarks for what period of time this was checked.

IV. Open Burning

A. Only complete this part if the facility open burns hazardous waste.

- | | Yes | No | NI* | Remarks |
|---|-------|-------|-------|---------|
| 1. Does this facility burn <u>only</u> waste explosives?
(A <u>No</u> answer means <u>other</u> hazardous waste is open-burned.) 265.382 | _____ | _____ | _____ | |
| 2. If this facility open-burns waste explosive, does it burn the waste at a distance greater than or equal to the minimum specified distance (below)

265.382 | _____ | _____ | _____ | |

265.382

Pounds of waste explosives or propellants	Minimum distance from open burning or detonation to the property of others
0 to 100.....	204 m 670 ft
101 to 1,000.....	380 m 1,250 ft
1,001 to 10,000.....	530 m 1,730 ft
10,001 to 30,000.....	690 m 2,260 ft

Q CHEMICAL, PHYSICAL and BIOLOGICAL TREATMENT

Facility Name: MUELLER BRASS CO.

Date of Inspection: AUG 27, 1981

- | | yes | No | NI* | Remarks |
|---|-----|-------|-------|---------|
| 1. Is equipment used to treat only those wastes which will not cause leakage, corrosion, or premature failure? | ✓ | _____ | _____ | |
| 2. Is a continuously fed system equipped with a means of hazardous waste inflow stoppage or control (e.g., cut-off system?) | ✓ | _____ | _____ | |

U.S. ENVIRONMENTAL PROTECTION AGENCY



GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

E	F	M	I	D	O	O	5	3	5	7	5	0	4	T/A	C
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

PLEASE PLACE LABEL IN THIS SPACE

II. POLLUTANT CHARACTERISTICS

I. EP. D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X'			SPECIFIC QUESTIONS	MARK 'X'		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1	SKIP	M	U	E	L	L	E	R	B	R	A	S	S	C	O
---	------	---	---	---	---	---	---	---	---	---	---	---	---	---	---

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)										B. PHONE (area code & no.)									
2	R	O	L	L	W	I	L	L	I	A	M	D	I	R	O	F	E	N	G

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX															B. CITY OR TOWN					C. STATE		D. ZIP CODE		
3	1	9	2	5	L	A	P	E	E	R	A	V	E											
4	P	O	R	T	H	U	R	O	N					M	I	4	8	0	6	0				

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER															B. COUNTY NAME					C. CITY OR TOWN			D. STATE		E. ZIP CODE			F. COUNTY CODE (if known)		
5	1	9	2	5	L	A	P	E	E	R	A	V	E																	
6	P	O	R	T	H	U	R	O	N					M	I	4	8	0	6	0										

VII. SIC CODES (4-digit, in order of priority)

A. FIRST										B. SECOND									
7	3	3	5	1	(specify)	7	3	4	6	3	(specify)								
Extruding, Drawing Copper Alloy										Non Ferrous Forgings									
C. THIRD										D. FOURTH									
7	3	4	5	1	(specify)	7				(specify)									
Screw Machine Products																			

VIII. OPERATOR INFORMATION

A. NAME																																																												B. Is the name listed in Item VIII-A also the owner?																			
8 M U E L L E R B R A S S C O																																																												<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO																			
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)																																																												D. PHONE (area code & no.)																			
F = FEDERAL S = STATE P = PRIVATE																														M = PUBLIC (other than federal or state) O = OTHER (specify)																														P (specify)										3 1 3 9 8 7 4 0 0 0									
E. STREET OR P.O. BOX																																																																															
1 9 2 5 L A P E E R A V E																																																																															
F. CITY OR TOWN																																								G. STATE										H. ZIP CODE										IX. INDIAN LAND																			
B P O R T H U R O N																																								M I										4 8 0 6 0										Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																			

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)																														D. PSD (Air Emissions from Proposed Sources)																													
9 N																														9 P																													
B. UIC (Underground Injection of Fluids)																														E. OTHER (specify)																													
9 U																														(specify) See Addendum I attached																													
C. RCRA (Hazardous Wastes)																														E. OTHER (specify)																													
9 R																														(specify)																													

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Manufacture of copper alloy rod, tube, forgings, machined parts including melting, casting, extrusion, drawing, machining, heat treating, chemical treating, packaging, warehouse, and shipping.

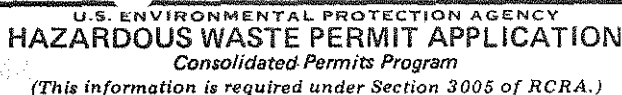
XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)																																								B. SIGNATURE																				C. DATE SIGNED																			
Donald E. Kullander, President																																								<i>Donald E. Kullander</i>																				Nov. 19, 1980																			

COMMENTS FOR OFFICIAL USE ONLY

C																																																											
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



S												V/A	C
F	M	I	D	0	0	5	3	5	7	5	04		I

(This information is required under Section 3005 of RCRA.)

DATE RECEIVED (yr., mo., & day)	
23	24 29

COMMENTS

Place an "X" in the appropriate box in A or B below (*mark one box only*) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION (place an "X" below and provide the appropriate date)

☒ 1. EXISTING FACILITY (See instructions for definition of "existing" facility.
Complete item below.)

☐ 2. NEW FACILITY (Complete item below.)

FOR NEW FACILITIES,
PROVIDE THE DATE
(yr., mo., & day) OPERA
TION BEGAN OR IS
EXPECTED TO BEGIN

C	YR.	MO.	DAY	FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)
8	75	07	01	

YR.		MO.		DAY	
73	74	75	76	77	78

B. REVISED APPLICATION (place an "X" below and complete Item I above)

☐ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

A. PROCESS CODE — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (*including its design capacity*) in the space provided on the form (*Item III-C*).

B. PROCESS DESIGN CAPACITY — For each code entered in column A enter the capacity of the process.

1. AMOUNT — Enter the amount.

2. **UNIT OF MEASURE** — For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
<u>Storage:</u>		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
<u>Dewatering:</u>		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
<u>Treatment:</u>		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided: Item III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

<div style="display: flex; justify-content: space-between; align-items: center;"> <div> <div style="border: 1px solid black; padding: 2px;">C</div> <div style="border: 1px solid black; padding: 2px;">1</div> </div> <div>DUP</div> <div> <div style="border: 1px solid black; padding: 2px;">T/A</div> <div style="border: 1px solid black; padding: 2px;">C</div> <div style="border: 1px solid black; padding: 2px;">1</div> </div> </div>																	
<div style="display: flex; justify-content: space-between;"> <div>1 2</div> <div>13 14 15</div> </div>																	
LINE NUMBER	A. PRO- CESS CODE (from list above)			B. PROCESS DESIGN CAPACITY				FOR OFFICIAL USE ONLY	LINE NUMBER	A. PRO- CESS CODE (from list above)			B. PROCESS DESIGN CAPACITY				FOR OFFICIAL USE ONLY
				1. AMOUNT (specify)		2. UNIT OF MEA- SURE (enter code)							1. AMOUNT		2. UNIT OF MEA- SURE (enter code)		
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
X-1	S	0	2	600				G		5							
X-2	T	0	3	20				E		6							
1	T	0	1	See IIIC. Page 2				E		7							
2	J		3	265				Y		8							
3										9							
4										10							

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

Line No. 1 Pickling & Electroplating rinse water treatment process using Ion Exchange and detoxification (including reduction, pH adjustment, clarification, dewater sludge with filter press). Ion exchange system design capacity 21000 GPH - Recirculation. Detoxification system design capacity 2400 GPH with discharge to POTW (City of Port Huron).

Refer to attached Dwg. BL-25-13578, Flow Diagram.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS.....	P	KILOGRAMS.....	K
TONS.....	T	METRIC TONS.....	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
- Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

EPA I.D. NUMBER (enter from page 1)

FOR OFFICIAL USE ONLY

W	M	I	D	0	0	5	3	5	7	5	0	4	T/A	C	1	5	W	DUP	T/A	C	2	DUP
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES																		
				1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (if a code is not entered in D(1))														
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
1	F 0 0 1	1200	K	S	0	1																
2	F 0 0 2	1200	K	S	0	1																
3	F 0 0 6	335,000	K	S	0	1																
4	F 0 0 7	12000	K	S	0	1																
5	F 0 0 8	12000	K	S	0	1																
6	F 0 1 0	12000	K	S	0	1																
7	F 0 1 1	12000	K	S	0	1																
8	F 0 1 2	12000	K	S	0	1																
9	P 1 0 6	1200	K	S	0	1																
10	P 0 3 0	1200	K	S	0	1																
11	P 0 2 9	1200	K	S	0	1																
12	P 0 5 6	1200	K	S	0	1																
13	U 2 2 8	1200	K	S	0	1																
14	U 0 1 3	1200	K	S	0	1																
15	D 0 0 2	12000	K	S	0	1																
16	D 0 0 3	1200	K	S	0	1																
17	D 0 0 6	1200	K	S	0	1																
18	D 0 0 7	1200	K	S	0	1																
19	D 0 0 8	3,330,000	K	S	0	3																
20																						
21																						
22																						
23																						
24																						
25																						
26																						

continued from the front.

V. DESCRIPTION OF HAZARDOUS WASTES

continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)											
M	I	D	0	0	5	3	5	7	5	0	4
										6	

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)										LONGITUDE (degrees, minutes, & seconds)									
4	2	5	8	4	5	N					8	2	2	7	3	0	W		
65	66	67	68	69	70	71					72	73	74	75	76	77	78	79	

VIII. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER										2. PHONE NO. (area code & no.)									
3. STREET OR P.O. BOX										4. CITY OR TOWN									
5. ST.										6. ZIP CODE									

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
Donald E. Kullander	<i>Donald E. Kullander</i>	November 19, 1980

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED

	Yes	No	NI*	Remarks
3. Has the owner or operator addressed the waste analysis requirements of 265.402?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>NO CHANGES MADE IN WASTE TREATMENT</u>
4. Are inspection procedures followed according to 265.403?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>ALL NEW METHODS WOULD BE CHECKED BY LARS</u> <u>CONTINUOUS DURING OPERATION</u>
5. Are the special requirements fulfilled for ignitable or reactive wastes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>NONE PRESENT</u>
6. Are incompatible wastes treated? (If yes, 265.17(b) applies.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>NONE PRESENT</u>

Note: EPA has temporarily suspended the applicability of the requirements of the hazardous waste regulations in 40 CFR Parts 122, 264 and 265 to owners and operators of (1) wastewater treatment tanks that receive, store, and treat wastewaters that are hazardous waste or that generate, store or treat a wastewater treatment sludge which is a hazardous waste where such wastewaters are subject to regulation under Sections 402 or 307(b) of the Clean Water Act (33 U.S.C. 1251 et seq.) and (2) neutralization tanks, transport vehicles, vessels, or containers which neutralize wastes which are hazardous only because they exhibit the corrosivity characteristic under 40 CFR §261.22 or are listed as hazardous wastes in Subpart D of 40 CFR Part 261 only for this reason.

IX

Complete this section if the owner or operator of a TSD facility also generates hazardous waste that is subsequently shipped off-site for treatment, storage, or disposal.

1. MANIFEST REQUIREMENTS

	Yes	No	NI*	Remarks
(A) Does the operator have copies of the Manifest available for review? 262.23(a)3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(B) Do the Manifest forms reviewed contain the following information: (If possible, make copies of/or record information from, manifest(s) that do not contain the critical elements)				
1. Manifest document number? 262.21(a)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Name, mailing address, telephone number, and EPA ID Number of Generator 262.21(a)2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Yes	No	NI*	Remarks
3. Name and EPA ID Number of Transporter(s)? 262.21(a)3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Name, address, and EPA ID Number of Designated permitted facility and alternate facility? 262.21(a)4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. The description of the waste(s) (DOT shipping name, DOT hazard class, DOT identification number)? 262.21(a)5 DOT information in CFR 49 172.101, 172.202 and 172.203	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. The total quantity of waste(s) and the type and number of containers loaded? 262.21(a)6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Required Certification? 262.21(b)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Required Signatures? 262.23(a)1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(C) Does the Owner or Operator Submit Exception Reports when Needed? 262.42	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HAS NEVER BEEN REQUIRED

2. PRE-TRANSPORT REQUIREMENTS

- APPLIES TO SLUDGE				
Is waste packaged in accordance with DOT Regulations? (Required prior to movement of hazardous waste off site) 262.30 49 CFR Parts 173.178 and 179	CBAHOUSE DUST BEING STORED PENDING SALE - NOT READY FOR TRANSPORT			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA - SHIPPED IN BULK
(B) Are waste packages marked and labeled in accordance with DOT Regulations concerning hazardous waste materials? (Required to movement of hazardous waste off site) 262.31 49 CFR Part 172	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA - BULK SHIPMENTS
(C) If required, are placards available to transfer? 262.33 49 CFR Part 172, Subpart F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA - HAULER PLACARDS LOADS

Omit Section 3 if the facility has interim status and s Part A permit application describes storage

3. On Site Accumulation

RETAINS TO
BAGHOUSE DUST

	Yes	No	NI*	Remarks
1. Are containers marked with start of accumulation date?	✓			
2. ^{262.34(a)3} Are the containers of hazardous waste removed from installation before they can accumulate for more than 90 days			✓	HAS NOT YET BEEN 90 DAYS
3. ^{262.34(a)1} If no, the facility must be storage or disposal facility 262.34(b)				
Are wastes stored in containers managed in accordance with 40 CFR Part 265.174 and 265.176 (weekly inspections of containers; containers holding ignitable or reactive wastes located at least 15 meters (50 Feet) from facility's property line?	✓			
4. If wastes are stored in tanks, are the tanks managed according to the following requirements?				→ TRANSFER TANK, NOT STORAGE
a. Are tanks used to store only those wastes which will not cause corrosion leakage or premature failure of the tank?	✓			PROTECTIVE LINERS + MATERIALS USED
b. ^{265.192(b)} Do uncovered tanks have at least 60 cm (2 feet) of freeboard, dikes, or other containment structures?	✓			COVERED, SPILL WOULD GO TO SUMP + THEN TREATMENT
c. ^{265.192(c)} Do continous feed systems have a waste-feed cutoff?			NA	
d. ^{265.192(d)} Are required daily and weekly inspections done?	✓			DAILY
e. ^{265.194} Are reactive & ignitable wastes in tanks protected or rendered non-reactive or non-ignitable? (If waste is rendered non-reactive or non-ignitable, see treatment requirements?				NA
f. ^{265.198, 265.17} Are incompatible wastes stored in separate tanks? (If not, the provisions of 40 CFR §265.17(b) apply)				NA

265.199

VI. RECORDKEEPING and REPORTING
(Part 262, Subpart D)

	Yes	No	NI*	Remarks
(A) Are Manifests, Annual Reports, Exception Reports, and all test results and analyses retained for at least three years? 265.71(a)5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>WILL KEEP FOR AT LEAST 3 YEARS</u>
(B) Has the Generator submitted Annual Reports and Exception Reports as required?	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>	<u>NOT REQUIRED YET</u>

VII. INTERNATIONAL SHIPMENTS
(Part 262, Subpart E)

(A) Has the installation imported or exported Hazardous Waste? 262.50	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
--	-------------------------------------	--------------------------	--------------------------	--

(If A was answered Yes, then complete the following as applicable.)

1. Exporting Hazardous waste, has a generator:
 - a. Notified the Administrator in writing?
262.50(b)1
 - b. Obtained the signature of the foreign consignee confirming delivery of the waste(s) in the foreign country?
262.50(b)2
 - c. Met the Manifest requirements?
262.50(b)3
2. Importing Hazardous Waste, has the generator:
262.50(d)
 - a. Met the manifest requirements?

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M U E L L E R B R A S S C O .

P O R T H U R O N , M I C H I G A N 4 8 0 6 0



A r e a C o d e 3 1 3

T e l : 9 8 7 - 4 0 0 0

November 19, 1980

U. S. Environmental Protection Agency
230 Dearborn Street
Chicago, Illinois 60604

Attention: Permit Contact

Subject: EPA Form 3510-1 and 3510-3

Gentlemen:

 You will find enclosed the subject forms which have been completed using best current information available.

 Some materials have been included which may be deleted at a later date when test results verify the analysis for certain contaminants - for example, lead content in reclaim material.

Yours truly,

E. L. Wefel, for
W. C. Roll
Director of Engineering

ELW/emg
enc/



November 11, 2008

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Report for October 2008

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Co. U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP for the period of October 2008.

Paragraph 83 Item C requires a Statement of Work (SOW) be submitted to and approved by the U.S. EPA prior to commencement of construction for the SEP. The SOW was required to be submitted within 30 days after the effective date of the CAFO. The effective date of the CAFO was September 29, 2008.

The SOW was mailed on October 15th. We are awaiting approval of the SOW and as such, no construction has taken place in October of this year.

Should you have any questions regarding the above, please let us know.

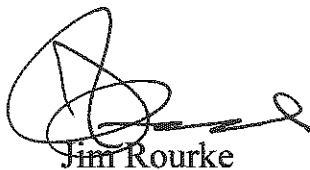
Sincerely,



Barry G. Munce
Technical Services Manger

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", with a stylized, looping initial "J" and a horizontal line extending to the right.

Jim Rourke
President Industrial Products Division



October 23, 2008

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Certification Page for Supplemental Environmental Project (SEP)
Construction Report for September 2008

Dear Mr. Beedle:

I mailed the first construction report as required under the Consent Agreement and Final Order (CAFO) with Mueller Brass Co. U.S. EPA ID NO. MID005357504 on 10/15/2008. I inadvertently forgot to attach the certification page. Please find an additional copy of the construction report with the certification page attached.

I apologize for this error. Should you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in black ink, appearing to read 'B. G. Munce', is written over the typed name and title.

Barry G. Munce
Technical Services Manger



Barry Munce
Technical Services Manager
Mueller Brass Co.
Industrial Products Division of Mueller Industries
2199 Lapeer Ave.
Port Huron, MI 48060
PH: 810.966.0279
bmunce@muellerindustries.com

October 18, 2008

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Statement of Work (SOW) for the
Supplemental Environmental Project (SEP)

Dear Mr. Beedle:

On March 31, 2006, the U.S. EPA conducted a hazardous waste assessment, as part of a multimedia inspection at Mueller Brass Company's facility (Mueller Brass Co.) located at 2199 Lapeer Avenue in Port Huron, Michigan. As a result of that inspection, it was determined that Mueller Brass may have violated regulations under the Resource Conservation and Recovery Act (RCRA) 42 U.S.C. 6901 et seq., as amended.

As part of the Consent Agreement and Final Order (CAFO) resulting from this inspection, a Supplemental Environmental Project (SEP) was proposed. Paragraph 83 C of the CAFO requires Mueller Brass Co. to submit a SOW within 30 days after the effective date of the CAFO. "In the SOW, Respondent shall identify technical specifications, long term operation and maintenance requirements (e.g., filter replacements), and a schedule for construction of the reverse osmosis system"

This document serves as fulfillment of that requirement.

The following will include a brief history of the site and processes, the current status of wastewater treatment, a description of the reverse osmosis system, how the reverse osmosis system will interface with the current wastewater treatment to provide environmental and public health benefits, as well as the technical specifications, long term operational and maintenance costs and a schedule for construction.

History

Mueller Brass Co. manufactures non ferrous brass rod and forgings at this site. The company has been on site and in continuous operation since 1917. Mueller Brass Co. supplied the first commercially available forgings and invented the copper water tube soldered fittings system.

As producers of non ferrous metal products, process waters containing dissolved metal constituents are generated. Process waters from the plant are collected and conveyed to an onsite wastewater system for treatment. After treatment, the water is discharged to the City of Port Huron sanitary sewer system for processing in their secondary treatment system for sanitary waste.

The city discharges its treated water to the St. Clair River which is a portion of the Great Lakes water system.

Mueller Brass currently maintains two discharge permits from the City of Port Huron for its sanitary sewer system. The first is a federal pretreatment permit for discharge of treated process water as promulgated in the Code of Federal Regulations 40 CFR) Parts 9, 122 and 403. The second is a municipal permit for discharge of sanitary waste to the city's sanitary sewer system. The City of Port Huron acts as the control authority for both of these permits.

Mueller Brass Co. Current Wastewater Treatment System

Mueller Brass Co. maintains a metal detoxification system for treatment of non ferrous metals and neutralization of acidic rinse waters. The system is comprised of multiple incoming storage tanks, two stage neutralization, metal precipitation, coagulation, clarification, sludge storage, sand filtration, dewatering operation and a drying operation to further dewater the filter cake.

On average, Mueller Brass discharges approximately 180,000 gallons a day of treated wastewater from its onsite treatment system to the local POTW. The discharge is in compliance with the local municipal permit and the Federal Pretreatment permit mentioned above.

The local POTW has no treatment for metals. There fore, the metals remaining in the discharge are discharged to the St. Clair River which is apart of the Great Lakes water system.

The metal constituents discharged to the POTW and eventually the St Clair River consists primarily of copper, zinc, lead, iron, tin and nickel.

Metals removed in the form of metal hydroxide filter cake were disposed of in a hazardous waste landfill.

The metal hydroxide filter cake going forward will be recycled offsite to reclaim the metals for reuse. The total metals shipped off site for recycling (in pounds) including shipping documents showing the destination facility will be reported each quarter.

Description of Reverse Osmosis Treatment

Normal osmosis is the movement of a liquid from an area of low concentration through a membrane to an area of high concentration. There is a natural pressure that drives this function. No external force is required for this.

Reverse osmosis is the opposite. Liquid with a high concentration is forced through a membrane to an area of lower concentration. The force to accomplish this is normally supplied by means of a pump. In effect, Reverse osmosis is a filtering technique.

The membrane is normally a dense section of material that allows water to pass through but restricts material with higher molecular weights than water. For wastewater, depending on the contaminants, this may require approximately 250 psi of pressure to drive this process.

This allows for items such as salts, dyes, bacteria and etc. to be removed from the water stream while allowing water to pass through. The separations of ions with reverse osmosis is accomplished by means of charged particles

The contaminants are captured on the filter, removed and disposed of. Periodically the membranes will need to be replaced.

The technical specifications and long term operational and maintenance requirements can be found in the attachments to this document.

Integration of the SEP with the Current Wastewater Treatment System

Process wastewater from the mill will continue to be routed to the existing metal detoxification wastewater treatment system described earlier.

The discharge from the current wastewater treatment system, which is now discharging to the local POTW, would be rerouted to the entrance end of the reverse osmosis unit. The reverse osmosis unit will have a meter to measure the total water (in gallons) treated by the reverse osmosis system.

The reverse osmosis system will measure the water (in gallons) that is sent back to the facility for reuse as well the total water (in gallons) discharged from the reverse osmosis system to the POTW on a monthly basis.

Additional treatment through the reverse osmosis system would remove metals currently being discharged to the city and by extension to the environment. The reverse osmosis system will remove approximately 90 % of the metals that pass through the system

Approximately 25 % of the incoming water to the reverse osmosis system will be reject water containing the contaminants that do not pass through the membrane. The remaining 75 % will be treated water for reuse in the facility.

The reject water will contain additional metals that the current system is unable to capture. It will be routed to the existing wastewater treatment system for treatment and then become part of the current wastewater treatment discharge that is routed to the reverse osmosis system.

Treated water from the RO unit will be stored and routed to the facility for reuse as needed.

Pollutant Reduction

The current wastewater treatment system is limited as to the amount of metals it can remove from the incoming wastewater as compared to reverse osmosis as mentioned above, the metals remaining in the discharge from the current wastewater treatment system will be routed to the reverse osmosis system instead of being discharged to the city sanitary sewer.

The reverse osmosis system will not only remove 90 % of the metals the current system did not remove, it will also concentrate them in the reject water sent back to the current system. By concentrating the metals the current system will be able to remove them from solution. They will then end up in the metal hydroxide filter cake which will be recycled.

This will result in an overall reduction of metals in the environment, namely the St. Clair River. Mueller will report on the total metals discharged to the POTW in pounds every quarter

The amount of metal removed (in pounds) will depend in part on the amount of production that occurs. The more often the production lines run and generate water to be treated the greater the amount of metals (in pounds) that will be removed.

Project Time Line

A capital expenditure for this for this project has been approved. The project time is attached. This time line may vary dependent on necessary corrections to the SOW as required by the EPA.

We appreciate your assistance in working with us on this project. We look forward to approval of the SOW so we may commence construction and installation of the reverse osmosis system.

Should you have any questions regarding the information above, please do not hesitate to call.

Regards,

A handwritten signature in black ink, appearing to read 'Barry Munce', with a long horizontal flourish extending to the right.

Barry Munce
Manager Technical Services

Cc: J. Rourke, Mueller Brass Co.
J. Davidson, Mueller Brass Co.
R. Kartanys, Mueller Brass Co.

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read 'Jim Rourke', with a large, stylized initial 'J'.

Jim Rourke

President Industrial Products Division



October 14, 2008

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Report for September 2008

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Co. U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction report of the SEP for the period of September 2008.

Paragraph 83 Item C requires a Statement of Work (SOW) be submitted to and approved by the U.S. EPA prior to commencement of construction for the SEP.

The SOW which is due on or before October 30th has not yet been submitted, therefore construction on the SEP has not begun.

Should you have any questions regarding the above, please let us know.

Sincerely,



Barry G. Munce
Technical Services Manger

Phone 810 966 0279

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



October 14, 2008

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

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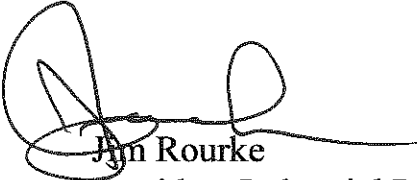
Sincerely,

A handwritten signature in black ink, appearing to read 'Barry G. Munce', with a long, sweeping horizontal line extending to the right.

Barry G. Munce
Technical Services Manger

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", with a large, stylized loop at the end.

Jim Rourke
President Industrial Products Division



CONSTRUCTION COMPLETION REPORT

**Mueller Brass Company
2199 Lapeer Ave.
Port Huron, MI 48060**

**In relation to:
Docket No. RCRA-05-2008-0016**

**Prepared by:
Kevin Pedler**

**Submitted to:
Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604**



INTRODUCTION

- 1.1 Purpose:** This construction completion report has been prepared to certify that the supplemental environmental project (SEP) agreed upon by the U.S. Environmental Protection Agency and Mueller Brass Company has been completed pursuant the provisions of the referenced CAFO. Specifically, it is the intent of this report to demonstrate compliance to the requirements of CAFO Docket No. RCRA-05-2008-0016 and in congruence with the approved statement of work.
- 1.2 Overview:** It was agreed upon in the above referenced consent agreement in paragraph 64 that Mueller Brass Company would perform a supplemental environmental project as a portion of the settlement to a violation of the Resource Conservation and Recovery Act during a site inspection on March 30-31 2006. Paragraph 83 of the CAFO specifies that this SEP is to be the installation of a reverse osmosis treatment system downstream of the pre-existing wastewater treatment system located on site. It further stipulates that the new system will have a 90% removal efficiency rate of the metals in the wastewater stream. In order to fully eliminate environmental contamination from these metals Mueller Brass Company committed in the statement of work to begin recycling the filter cake slurry created from the wastewater treatment process.



Process Stipulations

2.1 Paragraph 83A: In this paragraph the general layout of the wastewater treatment process is dictated stating that the RO unit will lie upstream of the discharge point and downstream of the pre-existing treatment system. In general, this condition was upheld by Mueller Brass Company. However, the process is more specifically described in the statement of work stating that 75% of the RO treated water will be reused in the facility and 25% will be contaminated water routed to the existing water treatment system to begin the cycle over again. This attempt for a closed loop system was not feasible, however. The contaminant that could not be removed from the existing treatment unit would cycle up in the water stream and eventually over burden the membranes in the RO unit. In alteration to this design, but with the same environmental protection objectives in mind a new process flow was created. This flow still sends all influent to the pre-existing treatment unit and then to the RO unit, and still reuses 75% of the water in the facility. However, the contaminated flow from the RO unit is now being returned to a portion of the pre-existing unit that has been isolated from the initial flow. The RO 'reject' stream is sent through this portion of the pre-existing unit and then discharged to the city sewer system. Diagrams of both the water treatment flow prior to the SEP and the new wastewater treatment flow can be found in Appendix A.

Also stated in Paragraph 83A, "Respondent will design the reverse osmosis system with a 90% by weight removal efficiency for metals." In the technical specifications provided by the manufacturer and supplied to the EPA in the statement of work it is estimated with Mueller Brass Company's specific conditions greater than 95% of all suspended solids will be removed. Considering that this will be concentrated into 25% of the stream coined the "RO reject water" and then treated once more using the polymerization method it may be inferred that as a whole the system will remove 93% of the total metals prior to discharge. This inference is based upon historical data indicating that approximately 75% of the total metals are removed using the polymerization method.

BRASS ROD



- 2.2** Paragraph 83B: This paragraph states that the water treated by the RO unit will be reused at the facility. This condition has been fulfilled. The specific quantity of reused water will be highly contingent upon the volume of production.
- 2.3** Paragraph 83C: In this paragraph it is stipulated that Mueller Brass Company shall construct the SEP in accordance with the approved SOW. This condition has been completed barring the one deviation described above in section 2.1. This deviation, however, was verbally agreed to be acceptable per phone conversation by Michael Beedle of the EPA and Kevin Pedler of Mueller Brass Company. All other statements in the SOW have been upheld.
- 2.4** Paragraph 83D: "Within 30 days after completion of construction of the reverse osmosis system, Respondent shall begin operation of that system." This criterion has been fulfilled, as the RO unit was in operation within 24 hours of construction being considered complete.
- 2.5** Paragraph 83E: "Respondent will continue to operate the existing pre-treatment unit for at least five years after the effective date of the CAFO." It is hereby certified that the pre-existing treatment unit will remain in operation barring any breakdowns or production shutdowns until at least September 30th, 2013.
- 2.6** Paragraph 83F: "The total expenditure for the SEP, including performance of the activities set forth in the SOW, shall be no less than \$555,000." The total recorded amount invested in the project to date is \$628,730.
- 2.7** Paragraph 84: "Respondent shall apply for and obtain all permits and approvals necessary for the implementation and completion of the SEP activities." In order to motivate reclamation facilities to purchase the filter cake slurry it was necessary to reduce the moisture content thereby increasing the metal content of the hazardous secondary material. To accomplish this goal a revision was required of Mueller Brass Company's air permit. Permit to Install 180-00B was approved by the MIDEQ on August 17th, 2009. The revision eliminated special condition #54 of PTI 180-00A, which pertained to a minimal moisture content of 55% in the filter cake slurry.



Construction Completion Certification

- 3.1** This is to certify that the construction of the supplemental environmental project at the Mueller Brass site in Port Huron, MI has been completed in accordance with approved statement of work and CAFO Docket No. RCRA-05-2008-0016, as entered into by Mueller Brass Company and the Environmental Protection Agency.

A handwritten signature in black ink, appearing to read "Kevin Pedler", is written over a horizontal line.

Kevin Pedler

Environmental, Health, and Safety Coordinator
Mueller Brass Company

BRASS ROD

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", is written over a circular stamp. The stamp contains a stylized "X" and the name "Jim Rourke".

Jim Rourke

President – Industrial Products Division



Appendix

- 1. Old Wastewater treatment process flow**
- 2. New Wastewater treatment process flow**



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TECHNICAL PROPOSAL FOR

MUELLER INDUSTRIES, INC.
Port Huron, MI

Industrial Products Division
October 7, 2008
Rev. 07 BM



Mar Cor Purification, 3250 Harvester Road, Unit 6 / Burlington, ON L7N 3W9 CANADA
Tel: 905 639 7025 Fax: 905 639 0425



**MAR COR
PURIFICATION**
A Cantel Medical Company

Filtration, Water, and Disinfection Technologies

Biolab Equipment Ltd.

October 7, 2008

Mueller Industries, INC.
Industrial Products Division
Port Huron, MI
Attn.: Troy Haddad

Subject: Industrial RO System

Dear Troy,

Mar Cor Purification has updated our revision 5 to include a Bisulfite injection system too remove the residue chlorine from the incoming feed water supply from the Mueller waste water treatment system

In addition, we've included information on the waste water RO membranes including detailed projections and specifications, datasheets for the cleaning and sanitization chemicals for the preventative maintenance for increasing the life of the membranes. We've also provided some recommendations that has been reviewed with the membrane manufacturer for initial start up of the system to prevent premature fouling of the membranes.

We look forward to the possibility of working together with you and your company in the days ahead. If you have any questions or require more specifics regarding the information provided, please contact me.

Kind regards,

Lee Carlson
Midwest Regional Sales Manager

MAR COR PURIFICATION
A Cantel Medical Company
2850 Hitchcock Ave
Downers Grove, IL 60515
Office: 630-466-8089
Mobile: 630-715-3017
lcarlson@mcpur.com
www.mcpur.com

CC: Ben Rocznik – Mar Cor, VP Global Sales
Olivia Kusakawa – Mar Cor, Application Specialist

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APPENDIX C REVERSE OSMOSIS MEMBRANE DATA SHEETS

SECTION 1 GENERAL DESCRIPTION

Mar Cor Purification (MCP) is pleased to offer the foregoing proposal to meet the system requirements based on the attached water analysis (Appendix A) with the following exceptions or clarifications:

1. Based on the final feed water analysis and pilot study supplied to MCP, the following recommendations were outlined (See projections included in Appendix B):
 - a. Use ESPA1 membranes.
 - b. RO membrane cleaning is recommended every 3 months to reduce the possibility of fouling. If cleaning is required more often than that then the pretreatment should be re-evaluated.
 - c. Recommend starting at %55 percent system recovery and slowly increase over time to a maximum of 75%. Pressure drops need to be monitored.
 - d. Antiscalant chemicals will need to be selected based on the feed water quality. Mar Cor will provide this recommendation.
 - e. The membrane will reject greater than 95% if the dissolved ions at the time of start-up.

The Water Treatment System consists of the following components, as described in Section 2. A process flow diagram has been included in Appendix A:

- 1 **Multi-media filters**
- 2 **Acid Injection System c/w pH monitor**
- 3 **Antiscalant Injection System**
- 4 **RO System c/w pre-filter, VFD controlled RO pump**
- 5 **Upgraded Control Panel**
- 6 **Spare Parts & Expendables**
- 7 **Bisulfite Infection System c/w ORP monitor**

The system was designed to meet the following requirements:

Permeate flowrate	125	USGPM at 10 °C (50 °F)
Permeate Quality	>95%	Of all dissolved ions

SECTION 2 MAR COR SCOPE OF SUPPLY

Multimedia Filters

PROCESS DESCRIPTION

The function of a media filter is to reduce the level of suspended solids. The unfiltered water flows downward through the filter media bed. Suspended solids become trapped in the media bed and remain trapped until the media bed is backwashed. During the backwash process the flow through the media bed is reversed, the media bed fluidized and the trapped solids released and flushed to drain. Upon completion of the backwash process flow is redirected downward through the media bed and flows to drain thereby rinsing the media bed before the filter is returned to normal service.

If an uninterrupted flow of filtered water is required it will be necessary to utilize multiple filter units piped in a parallel arrangement. This will allow one filter at a time to be removed from service and backwashed.





Three (3) Automatic Micro ZTM Media Filter (model TAFMZ-3672M)

- Three (3) 36" x 72" FRP media tank with lined HDPE, 100# rating
- Three (3) set of CPVC hub and lateral
- Three (3) charge of 19 ft³ Micro ZTM media with gravel bed (nominal rating < 5 micron filtration)
- One (1) 2" Magnum ITTM control valve, top mount Noryl[®] construction with 2" inlet/outlet connections, 1½" drain
- 75 USGPM maximum total service flow, each
- 70 USGPM internal backwash flow, each
- Floor-mounted: 30" W x 30" D x 84" H, 1335 lb shipping weight (762mm W x 762mm D x 2134mm H, 605.5 kg) each
- Supplied loose to be installed onsite

The Micro ZTM Media Filter operates at 20-100 psi (138-690kPa) and 35-100°F (2-38°C). Electrical: 115/60Hz, single phase. Backwash/rinse control is based on timer or manual cycle initiation. Mechanical/electrical drawings, owner, operator and maintenance manual are included.

Antiscalant Injection System

PROCESS DESCRIPTION

Antiscalant chemical are utilized by injecting a small amount of solution into the feedwater stream to the RO system to prevent scaling of the RO membranes, therefore maintaining the projected permeate flow rates.

One (1) Grundfos metering pump and chemical day tank (chemical by others)

- One (1) level sensor kit
- One (1) control cable
- One (1) PVDF back pressure valve
- One (1) 100L storage tank
- One (1) multi-function valve
- 120VAC, 1 ph, 60Hz
- Floor-mounted

Acid Injection System

PROCESS DESCRIPTION

Sulfuric acid is utilized by injecting a small amount of the solution into the feedwater stream to the RO system to prevent premature fouling of the RO membranes, therefore maintaining the projected permeate flow rates.

One (1) Grundfos metering pump

- One (1) level sensor kit
- One (1) control cable
- One (1) PVDF back pressure valve
- One (1) 100L storage tank
- One (1) multi-function valve
- Floor-mounted
- pH sensor and controller

Bisulphite Injection System

PROCESS DESCRIPTION

Bisulfite chemical injection is utilized by injecting a small amount of solution into the feed water stream to the RO system to remove chlorine prior to the RO membranes, therefore maintaining the life of the membranes. Chlorine will do reversible damage to the membranes and would need to be replaced prematurely.

One (1) Grundfos metering pump

- One (1) level sensor kit
- One (1) control cable
- One (1) PVDF back pressure valve
- One (1) 100L storage tank
- One (1) multi-function valve
- Floor-mounted
- ORP sensor



RO System Skid

PROCESS DESCRIPTION

Reverse Osmosis is a method of extracting dissolved solids such as salts from water by means of a semipermeable membrane. The membrane has a high permeability to water but very low permeability to salts. To drive the water through the membrane at a finite rate requires that the pressure of the water feeding the membrane be raised significantly above the natural osmotic pressure of the water. A centrifugal pump is utilized for this purpose. In addition, the feed water is normally treated to avoid fouling of the membranes by particulate matter and scale. The permeate produced is at a rate of 75% of the feed water rate. The membranes normally reject in the region of 95-98% of the salts that were in the feed water.

Model 6Y8C28C-2RO, 8400 series

System capacity: 125 GPM at 50°F (nominal capacity: 150 GPM at 77°F)

High pressure piping: SS

Low pressure piping: PVC

Feed: 4"

Permeate: 3"

Drain: 3"

Skid: 286" L x 61" W x 89" H, carbon steel painted with an epoxy coating

Consists of the following main components:

One (1) Cartridge Filter assembly (model 22FOS3)

- One (1) 316L SS multi-cartridge housing(s), 22 round x 3 high, 150# rating at 300 °F
- Band clamp closure
- Twenty-two (22) 1 micron cartridges (model FM-001-30X)
- 2" MNPT inlet/outlet connections, ½" NPT drain, ¼" NPT vent
- Poly-coat over SS standard finish
- FDA grade Buna-N gasket
- Knife-edge seal at both ends

One (1) Booster Pump assembly (model CRN-45-6-2G)

- One (1) 316L SS multistage centrifugal pump(s)
- Non-self-priming, vertical pump with in-line suction/discharge ports
- Maintenance-free mechanical shaft seal (cartridge type)
- One (1) WEG motor rated for 50 HP
- Heavy-duty 2-pole NEMA C-face motor

Six (6) six-long FRP RO Housings, ASME stamped, 300# at 120 °F (model PRO-8-300-MSP), each consisting of:

- Thirty six (36) spiral wound composite membranes rated for 98.5-99.5% salt rejection and recommended applied pressure of 100-300 psi (model ESPA1 8" x 40")
- Membranes loading in FRP housings at Mar Cor Factory

Other features:

- Automatic Feed valve
- Low pressure switch
- Two (2) SS pressure gauges 0-100 psig
- Two (2) SS pressure gauges 0-400 psig
- Isolating and sampling valves
- Three (3) flowmeters

The RO System is supplied complete, pre-wired, pre-piped and tested.



Control Panel

One (1) painted steel (beige) enclosure, 42"H x 36"W x 10"D c/w mounting feet

- One (1) programmable controller ALLEN BRADLEY SLC-500 c/w:
 - One (1) rack 13 slots
 - One (1) power supply 120V/240V
 - One (1) processor SLC-5/05
 - Two (2) digital inputs 16 pts
 - Two (2) digital outputs 16 pts
 - Eight (8) blank fillers
 - One (1) operator interface Panelview 1000, color, touchscreen, Ethernet
 - One (1) Ethernet switch 5 ports SPIDER 5TX
- One (1) 100A/600V/3P main disconnect c/w fuses
- One (1) 40...80A motor protector
- One (1) 50HP/460V/3P contactor
- Two (2) primary fuses
- One (1) 480V/120V/500VA transformer
- One (1) 120V/24V/150VA transformer
- One (1) 24VDC/5A power supply
- Eight (8) control fuses
- Eight (8) control relays
- Terminal blocks
- Wiring, drawing

Engineering

Engineering package includes the following:

- P & ID
- Shop drawings
- Owner operator manuals



Option "A" Instrumentation

- One (1) PVC product flow meter with totalizer and transmitter
- One (1) PVC reject flow meter with totalizer and transmitter
- One (1) PVC feed water flow meter with totalizer and transmitter

Note: Flows to be totalized by PLC

Option "B" CIP System

- One (1) 500USG LDPE Conical tank mounted with legs
- Valves and connections included
- One (1) multi staged centrifugal pump
- Hoses by others

Option "C" Spare Parts

- Forty four (44) P/N FM 001 30X 1 micron 30" filter elements (2 changes @ 22 / change
- One (1) P/N CRN64-4-2 Grundfos Pump End Only
- One (1) P/N WEG 50 HP motor 460 V 3 Ph 60 Hz
- Thirty Six (36) P/N ESPA1 8" x 40 " RO Membranes
- One (1) P/N 240-201 Thornton Conductivity Cell
- One (1) P/N H100-171 0-20 psi low pressure switch
- One (1) P/N 423913D SE 30 In Line Sensor Transmitter
- One (1) P/N 8020 2 ½" PVC Flow Sensor
- One(1) P/N 7266007 2 ½" 0-300 psi pressure indicator



SECTION 3 CUSTOMER RESPONSIBILITIES

- Deliver chemicals and services to equipment;
- System reception, placement, installation;
- Interconnecting piping and wiring.

Feed Water	Peak Flowrate	208 USGPM
	Quality	Appendix A attached
	Pressure	>30 PSI
	Temperature*	50 °F

RO performance is affected by feed water temperature.

Drain Requirements	Peak Flowrate	85 USGPM
Total water volumes	MMF	70 USGPM
Power Usage	480V/3/60 Hz	~15 kW
	110V/1/60Hz	
Air Requirements	Pressure	60-100 PSI
	Consumption	5 SCFM
	Quality	Dry, clean and oil free



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Biolab Equipment Ltd.

DELIVERY SCHEDULE

Based upon the equipment listed above. the estimated delivery will be **12 weeks** after receipt of Mueller Industries purchase order.

Installation of the above equipment is by others

FOB: Mar Cor Dock, Burlington ON, Canada

Note: RO Membranes and media for multi media and carbon filters to be installed by others at the job site. Available upon request to be provided by a Mar Cor Service Tech.



SECTION 4 STANDARD TERMS AND CONDITIONS

Adjustments: All prices are subject to adjustment based upon any change in taxes, duties, foreign exchange or factors beyond the reasonable control of Mar Cor Purification, Biolab Equipment Ltd. (Mar Cor). Prices are subject to change without notice and all quotations are valid for 30 days. Delivery is subject to prior sale. All orders are subject to a minimum charge.

Authorization: No change to these terms and conditions can be made without the express written consent of a company officer and bearing the corporate seal.

Back Orders: Back orders are stock items of which our supply is temporarily exhausted or special items which could not be made up in time for inclusion in this shipment. Everything is being done to hurry these items along and they will follow in another shipment ASAP.

Cancellation by Buyer: Buyer shall have the right to terminate this Order, in whole or in part, by written notice to Mar Cor at any time prior to the delivery by Mar Cor. Upon receipt of written notice of termination, Mar Cor shall stop all work in connection with this Order. In the event of such termination, Buyer shall pay, as full compensation for Mar Cor's work, Mar Cor's actual costs plus normal margins to the day work is stopped, including carrying & restocking charges incurred by Mar Cor in connection with its termination of any equipment or subcontracts hereunder, plus a normal margin on work performed to date.

Delivery: General delivery is 11 weeks after receipt of purchase order or approval of submittal drawings or as quoted, whatever happens last. Change orders will delay delivery and we will not be held responsible for project delays or costs. Delivery is also subject to prior orders received and will be awarded on a first come first serve basis. Material availability and certification of materials and instrumentation will add 4 to 6 weeks to the delivery should they become a requirement.

Factory Acceptance Tests: Mar Cor will complete a F.A.T. The F.A.T report will include pressures, flows, conductivity readings and test results specific to the product model.

Freight: All goods are Freight On Board our dock. Shipment is by our truck within 160 kilometres of our facility for Service Deionization Products (SDI). The Courier or Transport of customer choice will ship expendables. Shipments are sent either collect or pre-paid and add. Pre-paid and add shipments will include a \$20.00 administration fee.

Goods and Services: When goods and services are provided payment must be received within 30 days of shipment notwithstanding the fact that the certain equipment may not have been installed or related services may not have been supplied.



Liability: Mar Cor will not accept any liability to damage to facility or property due to floods or leaks. All water systems must be protected from water hammer and over expansion. Each system will require safety relief valves, vacuum breakers and leak detectors. Floors and walls must be sealed and sloped to adequate floor drains.

Lost or Damaged goods: When goods are delivered, note on bill of delivery of damaged or lost goods. Call and inform Freight Company of lost goods or, in the case of damaged goods, to come and examine these goods. Do not destroy packing material or cases until Freight Company has examined them.

Pricing: Domestic pricing is offered in Canadian dollars all out of country pricing is made in US dollars. We reserve the right to collect interest at the rate of 1% per month on all past due accounts.

Purchase Orders: The receipt of a Purchase Order does not in any way commit or indicate acceptance of that order by Mar Cor. All accepted orders will be confirmed by a faxed or e-mailed "order confirmation" with a copy signed by the customer and returned to Mar Cor.

Replacement: Must be paid for in full and the defective part(s) returned to Mar Cor for inspection. If deemed defective credits will be issued. Warranty does not cover the cost of shipment to Mar Cor or to the Manufacturer. Warranty does not cover labour, travel time or mileage.

Return Goods: No merchandise accepted for return without prior approval. Returns are subject to a restocking charge. Stock that has an expiry date must be returned within 30 days of shipment from Mar Cor. All other stock must be returned within 120 days. All returned goods received without authorization will be returned to sender C.O.D.

Service: Delivery, installation assistance, start up and training are available from the Mar Cor technical services department at a pre-determined hourly rate, time and one half for overtime and double time for Sunday, plus mileage.

Storage and On Hold Orders Policy

If the Equipment is not shipped within fifteen (15) days after notification to Purchaser that it is ready for shipping, for any reason beyond Mar Cor's reasonable control, including Purchaser's failure to provide shipping instructions, Mar Cor may store such Equipment at the purchaser's risk and expense in a warehouse or yard or upon Mar Cor's premises. When the equipment is placed in storage, it is deemed to have been shipped for invoicing purposes. During any period of delay, deferment or on hold requested by the Purchaser, Purchaser shall pay all handling, transportation and storage charges prevailing commercial rates calculated by cube and or weight upon submission by Mar Cor of invoices there of.

Purchaser may not obtain any delay or deferment of delivery unless Mar Cor agrees thereto in writing. In no event will Mar Cor agree to any such delay or deferment unless Purchaser establishes good and sufficient cause there of, to the satisfaction of Mar Cor,



and unless Purchaser agrees in writing to terms acceptable to Mar Cor.
In any case no period of delay or deferment at the request of the Purchaser may exceed 60 days.

Taxes: All taxes are extra including Provincial, Goods & Services taxes, State and Federal; taxes are due upon receipt of the invoice.

Terms of payment: Net 30 days on orders valued under \$ 50,000.00, progressive payments are mandatory on all other transactions. These terms are subject to credit approval. Accounts that are considered past due will be placed on hold and no goods or service will be provided until payment is received.

Progressive Payments:

30% on acceptance of purchase order

30% on shop drawing approval

30% on shipment or notification of readiness to ship

10% Hold Back required 30 days after startup or 90 days after shipment

Title and Security Interest

On all sales until Mar Cor collects in full all amounts owed by Purchaser to Mar Cor under our standard terms and conditions of sale and any other contract between Mar Cor and the Purchaser, Mar Cor retains title to the Equipment and Purchaser grants to Mar Cor a continuing security interest in and lien upon the Equipment and the proceeds thereof (including insurance proceeds), as security for the payment of all such amounts and the performance by Purchaser of all its obligations to Mar Cor pursuant to this and all other contracts, and the Purchaser shall have no right to sell, encumber or dispose of the Equipment.

Purchaser shall execute any and all financing statements and other documents and instruments and do and perform any and all other acts and things which Mar Cor may consider necessary, desirable or appropriate to establish, perfect or protect Mar Cor's title, security interest and lien.

In addition, Purchaser authorizes Mar Cor and its agents and employees to execute any and all such acts and things in Purchaser's name and on Purchaser's behalf. Such documents and instruments may also be filed without the signature of Purchaser to the extent permitted by law.

Warranty: Mar Cor Purification, Biolab Equipment Ltd. (Mar Cor) warrant all products manufactured by Mar Cor to be free from defects in material and workmanship under normal use for a period of one year from date of shipment. Warranty is only provided when the equipment is properly maintained in accordance with Mar Cor instructions. Our obligation shall be limited to the repair or replacement at our option of any parts we deem defective. Consequential damages due to the failure of any part or system are not provided. Mar Cor provides no other warranty, expressed or implied. There is no warranty of merchantability or fitness for a particular purpose. Other manufacturer's equipment offered, as part of any proposal shall carry the manufacturer's warranty. On site, labour is covered for the first 90 days. Travel time and expenses are not covered.



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A Cantel Medical Company

Filtration, Water, and Disinfection Technologies

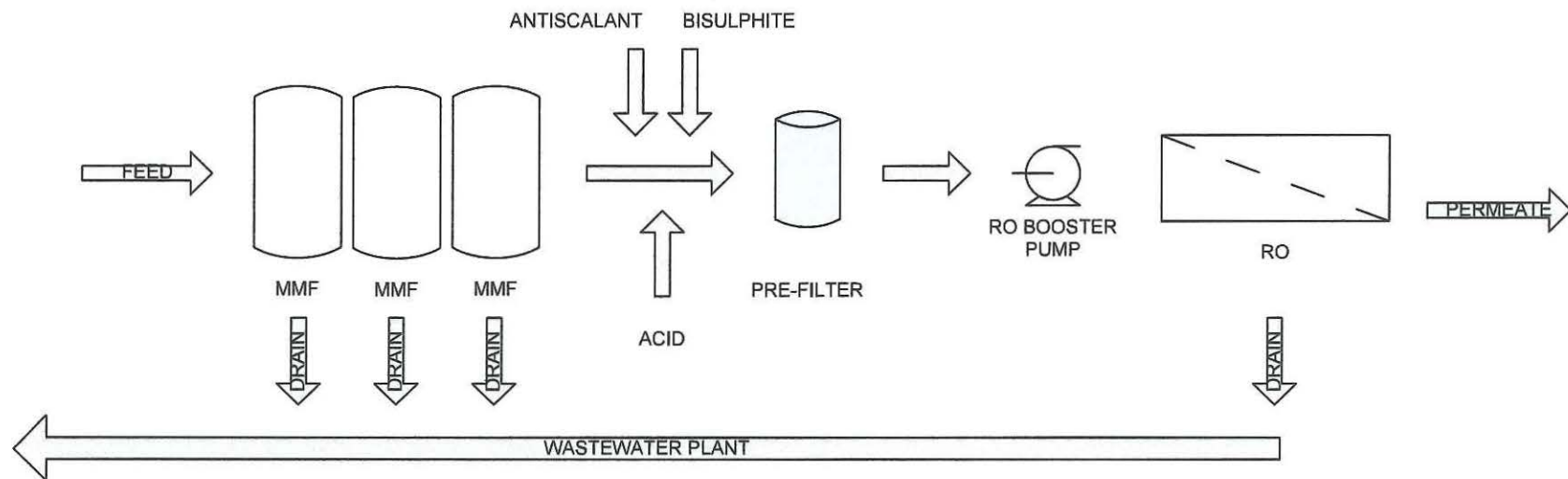
Biolab Equipment Ltd.

SECTION 5 SERVICE CENTER LOCATIONS

Mar Cor Purification - Service Centers

<u>Atlanta</u>	1855-F Beaver Ridge Circle Norcross, GA 30071 Tel: 770-448-7474 Svc: 888-396-2323 Fax: 770-448-8828	<u>Orlando</u>	5001 Gateway Blvd., Ste.21 Lakeland, FL 33811 Tel: 863-647-0918 Fax: 863-647-0946
<u>Birmingham</u>	Toll Free: (800) 346-0365	<u>Philadelphia</u>	Toll Free: (800) 346-0365
<u>Boston</u>	Fluid Solutions, Inc. 160 Stedman Street Lowell, MA 01851 Tel: 978-453-9600 Fax: 978-453-1223	<u>Raleigh Durham</u>	Toll Free: (800) 346-0365
<u>Chicago</u>	2850 Hitchcock Avenue Downers Grove, IL 60515 Tel: 630-435-1017 Svc: 888-962-7878 Fax: 630-435-1018	<u>Seattle</u>	1807 Pike St NW Suite 102-103 Auburn, WA 98001 Tel: 800-633-3080
<u>Cleveland</u>	Toll Free: (800) 346-0365	<u>Skippack</u>	4450 Township Line Rd Skippack, PA 19474-1429 Tel: (484) 991-0220 Toll Free: (800) 346-0365 Fax: (484) 991-0230
<u>Detroit</u>	140 Engelwood Drive, Ste. H Orion, MI 48359 Tel: 248-373-7844 Svc: 888-563-5656 Fax: 248-373-7838	<u>Washington/DC</u>	Toll Free: (800) 346-0365
<u>Minneapolis</u>	14605 28th Avenue N. Minneapolis, MN 55447-4822 Tel: 763-559-6868 Fax: 763-559-6869	<u>Burlington, CAN</u>	3250 Unit 6 Harvester Rd. Burlington, ON L7N 3W9 Tel: (905) 639-7025 Toll Free: (800) 268-5035 Fax: (905) 639-0425
<u>Nashville</u>	Toll Free: (800) 346-0365	<u>Oakville, CAN</u>	505 Unit 14 Iroquois Shore Rd. Oakville, ON L6H 2R3 Tel: (905) 639-7025 Toll Free: (800) 268-5035 Fax: (905) 639-0425
<u>New York</u>	Tel: 845-651-4777 Fax: 845-651-4777	<u>Montreal, CAN</u>	89 Avenue Lindsay Dorval, Quebec H9P 2S6 Tel: 514-636-0032 Fax: 514-636-8429

APPENDIX A PROCESS FLOW DIAGRAM



MAR COR
PURIFICATION
 A Cantel Medical Company

DRAWN BY

OKA

REVISED

29/09/2008

DESCRIPTION

MUELLER – PROCESS FLOW DIAGRAM

APPENDIX B REVERSE OSMOSIS PROJECTIONS

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 313.5 psi
 Feed pressure: 284.5 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 8.5 Element age: 6.0 years
 Chem dose, ppm (100%): 88.1 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 2.57 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed Conc gpm gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi psi	Element Type	Elem. No.	Array
1-1	89.5	53.0 30.6	13.4	1.10	254.5 0.0	ESPA1	24	4x6
1-2	35.5	61.2 43.4	10.7	1.05	210.5 0.0	ESPA1	12	2x6

Ion	Raw water		Feed water		Permeate		Concentrate	
	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3
Ca	332.0	827.9	332.0	827.9	10.290	25.7	794.9	1982.4
Mg	176.0	724.3	176.0	724.3	5.455	22.4	421.4	1734.2
Na	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
K	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NH4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Ba	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
Sr	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
CO3	152.0	253.3	9.8	16.3	0.018	0.0	23.8	39.7
HCO3	305.0	250.0	446.0	365.6	33.189	27.2	1040.1	852.5
SO4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Cl	744.2	1049.6	829.6	1170.1	14.802	20.9	2002.2	2824.0
F	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NO3	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
B	0.00		0.00		0.000		0.00	
SiO2	17.9		17.9		1.41		41.6	
TDS	1727.1		1811.3		65.2		4324.1	
pH	9.7		8.5		7.4		8.8	

	Raw water	Feed water	Concentrate
CaSO4 / Ksp * 100:	0%	0%	0%
SrSO4 / Ksp * 100:	0%	0%	0%
BaSO4 / Ksp * 100:	0%	0%	0%
SiO2 saturation:	16%	16%	38%
Langelier Saturation Index	3.02	1.74	2.80
Stiff & Davis Saturation Index	2.88	1.61	2.52
Ionic strength	0.05	0.05	0.11
Osmotic pressure	14.2 psi	15.5 psi	37.0 psi

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 313.5 psi
 Feed pressure: 284.5 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 8.5 Element age: 6.0 years
 Chem dose, ppm (100%): 88.1 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 2.57 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	89.5	53.0	30.6	13.4	1.10	254.5	0.0	ESPA1	24	4x6
1-2	35.5	61.2	43.4	10.7	1.05	210.5	0.0	ESPA1	12	2x6

Stg	Elem no.	Feed pres psi	Pres drop psi	Perm flow gpm	Perm Flux gfd	Beta	Perm sal TDS	Conc osm pres	CaSO4	Concentrate saturation levels				Lang.
										SrSO4	BaSO4	SiO2		
1-1	1	284.5	6.6	4.0	14.4	1.07	40.9	16.7	0	0	0	18	1.8	
1-1	2	277.9	5.9	3.9	14.0	1.10	38.8	18.1	0	0	0	19	1.9	
1-1	3	272.0	5.3	3.8	13.6	1.08	40.0	19.7	0	0	0	21	2.0	
1-1	4	266.7	4.6	3.7	13.2	1.09	42.3	21.6	0	0	0	23	2.2	
1-1	5	262.1	4.1	3.6	12.8	1.09	45.5	23.8	0	0	0	25	2.3	
1-1	6	258.0	3.5	3.5	12.5	1.10	49.4	26.5	0	0	0	27	2.4	
1-2	1	251.5	8.3	3.3	11.9	1.05	50.2	28.2	0	0	0	29	2.5	
1-2	2	243.2	7.6	3.1	11.3	1.10	53.2	29.8	0	0	0	31	2.5	
1-2	3	235.6	7.0	3.0	10.8	1.10	56.5	31.5	0	0	0	32	2.6	
1-2	4	228.6	6.5	2.9	10.4	1.10	60.1	33.3	0	0	0	34	2.7	
1-2	5	222.1	6.0	2.8	9.9	1.10	64.0	35.2	0	0	0	36	2.7	
1-2	6	216.1	5.5	2.6	9.5	1.10	68.3	37.2	0	0	0	38	2.8	

BASIC DESIGN

RO program licensed to:	*WBates		
Calculation created by:	*Bates		
Project name:	6Y (Mueller Industries)	Permeate flow:	125.00 gpm
HP Pump flow:	211.9 gpm	Raw water flow:	211.9 gpm
Recommended pump press.:	313.5 psi		
Feed pressure:	284.5 psi	Permeate recovery:	59.0 %
Feedwater Temperature:	10.0 C(50F)		
Feed water pH:	8.5	Element age:	6.0 years
Chem dose, ppm (100%):	88.1 HCl	Flux decline % per year:	15.0
Acidified feed CO2:	2.57	Salt passage increase, %/yr:	10.0
Average flux rate:	12.5 gfd	Feed type:	Wastewater

 *** THE FOLLOWING PARAMETERS EXCEED RECOMMENDED DESIGN LIMITS: ***

Concentrate Langelier Saturation Index too high (2.80)

The following are recommended general guidelines for designing a reverse osmosis system using Hydranautics membrane elements. Please consult Hydranautics for specific recommendations for operation beyond the specified guidelines.

Feed and Concentrate flow rate limits

Element diameter	Maximum feed flow rate	Minimum concentrate rate
8.0 inches	75 gpm (283.9 lpm)	12 gpm (45.4 lpm)
8.0 inches(Full Fit)	75 gpm (283.9 lpm)	30 gpm (113.6 lpm)

Concentrate polarization factor (beta) should not exceed 1.2 for standard elements

Saturation limits for sparingly soluble salts in concentrate

Soluble salt	Saturation
BaSO4	6000%
CaSO4	230%
SrSO4	800%
SiO2	100%

Langelier Saturation Index for concentrate should not exceed 1.8

The above saturation limits only apply when using effective scale inhibitor.
 Without scale inhibitor, concentrate saturation should not exceed 100%.

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 313.6 psi
 Feed pressure: 284.6 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 8.2 Element age: 6.0 years
 Chem dose, ppm (100%): 93.1 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 5.15 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi psi	Element Type	Elem. No.	Array
1-1	89.5	53.0	30.6	13.4	1.10	254.6 0.0	ESPA1	24	4x6
1-2	35.5	61.2	43.4	10.7	1.05	210.6 0.0	ESPA1	12	2x6

Ion	Raw water		Feed water		Permeate		Concentrate	
	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3
Ca	332.0	827.9	332.0	827.9	10.329	25.8	794.9	1982.3
Mg	176.0	724.3	176.0	724.3	5.476	22.5	421.4	1734.1
Na	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
K	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NH4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Ba	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
Sr	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
CO3	152.0	253.3	4.9	8.2	0.009	0.0	12.0	20.0
HCO3	305.0	250.0	447.4	366.7	33.284	27.3	1043.3	855.2
SO4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Cl	744.2	1049.6	834.5	1177.1	14.886	21.0	2014.0	2840.7
F	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NO3	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
B	0.00		0.00		0.000		0.00	
SiO2	17.9		17.9		1.41		41.6	
TDS	1727.1		1812.7		65.4		4327.2	
pH	9.7		8.2		7.1		8.5	

	Raw water	Feed water	Concentrate
CaSO4 / Ksp * 100:	0%	0%	0%
SrSO4 / Ksp * 100:	0%	0%	0%
BaSO4 / Ksp * 100:	0%	0%	0%
SiO2 saturation:	16%	16%	38%
Langelier Saturation Index	3.02	1.43	2.49
Stiff & Davis Saturation Index	2.88	1.30	2.21
Ionic strength	0.05	0.05	0.11
Osmotic pressure	14.2 psi	15.5 psi	37.0 psi

These calculations are based on nominal element & component performance when operated on a feed water of acceptable quality.
 NO GUARANTEE OF SYSTEM PERFORMANCE IS EXPRESSED OR IMPLIED unless provided in writing by Hydranautics.

Hydranautics (USA) Ph:(760)901-2500 Fax:(760)901-2578 info@hydranautics.com

Hydranautics (Europe) Ph: 31 5465 88355 Fax: 31 5465 73288 (11/72)

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries)
 HP Pump flow: 211.9 gpm
 Recommended pump press.: 313.6 psi
 Feed pressure: 284.6 psi
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 8.2
 Chem dose, ppm (100%): 93.1 HCl
 Acidified feed CO2: 5.15
 Average flux rate: 12.5 gfd

Permeate flow: 125.00 gpm
 Raw water flow: 211.9 gpm
 Permeate recovery: 59.0 %
 Element age: 6.0 years
 Flux decline % per year: 15.0
 Salt passage increase, %/yr: 10.0
 Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	89.5	53.0	30.6	13.4	1.10	254.6	0.0	ESPA1	24	4x6
1-2	35.5	61.2	43.4	10.7	1.05	210.6	0.0	ESPA1	12	2x6

Stg	Elem no.	Feed pres psi	Pres drop psi	Perm flow gpm	Perm Flux gfd	Beta	Perm sal TDS	Conc osm pres	CaSO4	Concentrate saturation levels				Lang.
										SrSO4	BaSO4	SiO2		
1-1	1	284.6	6.6	4.0	14.4	1.07	41.1	16.7	0	0	0	18	1.5	
1-1	2	277.9	5.9	3.9	14.0	1.10	38.9	18.2	0	0	0	19	1.6	
1-1	3	272.0	5.3	3.8	13.6	1.08	40.1	19.8	0	0	0	21	1.7	
1-1	4	266.8	4.6	3.7	13.2	1.09	42.5	21.7	0	0	0	23	1.8	
1-1	5	262.1	4.1	3.6	12.8	1.09	45.6	23.9	0	0	0	25	2.0	
1-1	6	258.1	3.5	3.5	12.5	1.10	49.5	26.5	0	0	0	27	2.1	
1-2	1	251.6	8.3	3.3	11.9	1.05	50.4	28.3	0	0	0	29	2.2	
1-2	2	243.3	7.6	3.1	11.3	1.10	53.4	29.9	0	0	0	31	2.2	
1-2	3	235.7	7.0	3.0	10.8	1.10	56.7	31.6	0	0	0	32	2.3	
1-2	4	228.6	6.5	2.9	10.4	1.10	60.3	33.4	0	0	0	34	2.4	
1-2	5	222.1	6.0	2.8	9.9	1.10	64.2	35.3	0	0	0	36	2.4	
1-2	6	216.1	5.5	2.6	9.5	1.10	68.6	37.3	0	0	0	38	2.5	

BASIC DESIGN

RO program licensed to:	*WBates		
Calculation created by:	*Bates		
Project name:	6Y (Mueller Industries)	Permeate flow:	125.00 gpm
HP Pump flow:	211.9 gpm	Raw water flow:	211.9 gpm
Recommended pump press.:	313.6 psi		
Feed pressure:	284.6 psi	Permeate recovery:	59.0 %
Feedwater Temperature:	10.0 C(50F)		
Feed water pH:	8.2	Element age:	6.0 years
Chem dose, ppm (100%):	93.1 HCl	Flux decline % per year:	15.0
Acidified feed CO2:	5.15	Salt passage increase, %/yr:	10.0
Average flux rate:	12.5 gfd	Feed type:	Wastewater

 **** THE FOLLOWING PARAMETERS EXCEED RECOMMENDED DESIGN LIMITS: ***

Concentrate Langelier Saturation Index too high (2.49)

The following are recommended general guidelines for designing a reverse osmosis system using Hydranautics membrane elements. Please consult Hydranautics for specific recommendations for operation beyond the specified guidelines.

Feed and Concentrate flow rate limits

Element diameter	Maximum feed flow rate	Minimum concentrate rate
8.0 inches	75 gpm (283.9 lpm)	12 gpm (45.4 lpm)
8.0 inches(Full Fit)	75 gpm (283.9 lpm)	30 gpm (113.6 lpm)

Concentrate polarization factor (beta) should not exceed 1.2 for standard elements

Saturation limits for sparingly soluble salts in concentrate

Soluble salt	Saturation
BaSO4	6000%
CaSO4	230%
SrSO4	800%
SiO2	100%

Langelier Saturation Index for concentrate should not exceed 1.8

The above saturation limits only apply when using effective scale inhibitor.
 Without scale inhibitor, concentrate saturation should not exceed 100%.

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 313.6 psi
 Feed pressure: 284.6 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 7.8 Element age: 6.0 years
 Chem dose, ppm (100%): 101.2 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 12.71 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	89.5	53.0	30.6	13.4	1.10	254.6	0.0	ESPA1	24	4x6
1-2	35.5	61.2	43.4	10.7	1.05	210.6	0.0	ESPA1	12	2x6

Ion	Raw water		Feed water		Permeate		Concentrate	
	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3
Ca	332.0	827.9	332.0	827.9	10.274	25.6	795.0	1982.5
Mg	176.0	724.3	176.0	724.3	5.446	22.4	421.4	1734.3
Na	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
K	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NH4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Ba	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
Sr	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
CO3	152.0	253.3	1.9	3.2	0.003	0.0	4.7	7.8
HCO3	305.0	250.0	439.9	360.6	32.736	26.8	1025.9	840.9
SO4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Cl	744.2	1049.6	842.3	1188.1	15.028	21.2	2032.9	2867.2
F	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NO3	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
B	0.00		0.00		0.000		0.00	
SiO2	17.9		17.9		1.41		41.6	
TDS	1727.1		1810.1		64.9		4321.5	
pH	9.7		7.8		6.7		8.1	

	Raw water	Feed water	Concentrate
CaSO4 / Ksp * 100:	0%	0%	0%
SrSO4 / Ksp * 100:	0%	0%	0%
BaSO4 / Ksp * 100:	0%	0%	0%
SiO2 saturation:	16%	16%	38%
Langelier Saturation Index	3.02	1.02	2.08
Stiff & Davis Saturation Index	2.88	0.89	1.80
Ionic strength	0.05	0.05	0.11
Osmotic pressure	14.2 psi	15.5 psi	37.1 psi

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 313.6 psi
 Feed pressure: 284.6 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 7.8 Element age: 6.0 years
 Chem dose, ppm (100%): 101.2 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 12.71 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	89.5	53.0	30.6	13.4	1.10	254.6	0.0	ESPA1	24	4x6
1-2	35.5	61.2	43.4	10.7	1.05	210.6	0.0	ESPA1	12	2x6

Stg	Elem no.	Feed pres psi	Pres drop psi	Perm flow gpm	Perm Flux gfd	Beta	Perm sal TDS	Conc osm pres	CaSO4	Concentrate saturation levels				Lang.
										SrSO4	BaSO4	SiO2		
1-1	1	284.6	6.6	4.0	14.4	1.07	40.7	16.7	0	0	0	18	1.1	
1-1	2	278.0	5.9	3.9	14.0	1.10	38.6	18.2	0	0	0	19	1.2	
1-1	3	272.0	5.3	3.8	13.6	1.08	39.8	19.8	0	0	0	21	1.3	
1-1	4	266.8	4.6	3.7	13.2	1.09	42.1	21.7	0	0	0	23	1.4	
1-1	5	262.1	4.1	3.6	12.8	1.09	45.3	23.9	0	0	0	25	1.5	
1-1	6	258.1	3.5	3.5	12.5	1.10	49.1	26.5	0	0	0	27	1.7	
1-2	1	251.6	8.3	3.3	11.9	1.05	50.0	28.3	0	0	0	29	1.8	
1-2	2	243.3	7.6	3.1	11.3	1.10	53.0	29.9	0	0	0	31	1.8	
1-2	3	235.7	7.0	3.0	10.8	1.10	56.2	31.6	0	0	0	32	1.9	
1-2	4	228.6	6.5	2.9	10.4	1.10	59.8	33.4	0	0	0	34	2.0	
1-2	5	222.1	6.0	2.8	9.9	1.10	63.7	35.3	0	0	0	36	2.0	
1-2	6	216.1	5.5	2.6	9.5	1.10	68.0	37.3	0	0	0	38	2.1	

BASIC DESIGN

RO program licensed to:	*WBates		
Calculation created by:	*Bates		
Project name:	6Y (Mueller Industries)	Permeate flow:	125.00 gpm
HP Pump flow:	211.9 gpm	Raw water flow:	211.9 gpm
Recommended pump press.:	313.6 psi		
Feed pressure:	284.6 psi	Permeate recovery:	59.0 %
Feedwater Temperature:	10.0 C(50F)		
Feed water pH:	7.8	Element age:	6.0 years
Chem dose, ppm (100%):	101.2 HCl	Flux decline % per year:	15.0
Acidified feed CO2:	12.71	Salt passage increase, %/yr:	10.0
Average flux rate:	12.5 gfd	Feed type:	Wastewater

 **** THE FOLLOWING PARAMETERS EXCEED RECOMMENDED DESIGN LIMITS: ***

Concentrate Langelier Saturation Index too high (2.08)

The following are recommended general guidelines for designing a reverse osmosis system using Hydranautics membrane elements. Please consult Hydranautics for specific recommendations for operation beyond the specified guidelines.

Feed and Concentrate flow rate limits

Element diameter	Maximum feed flow rate	Minimum concentrate rate
8.0 inches	75 gpm (283.9 lpm)	12 gpm (45.4 lpm)
8.0 inches(Full Fit)	75 gpm (283.9 lpm)	30 gpm (113.6 lpm)

Concentrate polarization factor (beta) should not exceed 1.2 for standard elements

Saturation limits for sparingly soluble salts in concentrate

Soluble salt	Saturation
BaSO4	6000%
CaSO4	230%
SrSO4	800%
SiO2	100%

Langelier Saturation Index for concentrate should not exceed 1.8

The above saturation limits only apply when using effective scale inhibitor.
 Without scale inhibitor, concentrate saturation should not exceed 100%.

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 224.1 psi
 Feed pressure: 195.1 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 8.5 Element age: 3.0 years
 Chem dose, ppm (100%): 88.1 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 2.57 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed Conc gpm gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi psi	Element Type	Elem. No.	Array
1-1	93.0	53.0 29.7	14.0	1.10	165.7 0.0	ESPA1	24	4x6
1-2	32.0	59.4 43.4	9.6	1.04	123.0 0.0	ESPA1	12	2x6

Ion	Raw water		Feed water		Permeate		Concentrate	
	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3
Ca	332.0	827.9	332.0	827.9	8.657	21.6	797.3	1988.3
Mg	176.0	724.3	176.0	724.3	4.589	18.9	422.7	1739.4
Na	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
K	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NH4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Ba	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
Sr	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
CO3	152.0	253.3	9.8	16.3	0.015	0.0	23.8	39.7
HCO3	305.0	250.0	446.0	365.6	27.985	22.9	1047.6	858.7
SO4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Cl	744.2	1049.6	829.6	1170.1	12.417	17.5	2005.6	2828.8
F	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NO3	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
B	0.00		0.00		0.000		0.00	
SiO2	17.9		17.9		1.18		42.0	
TDS	1727.1		1811.3		54.8		4338.9	
pH	9.7		8.5		7.4		8.8	

	Raw water	Feed water	Concentrate
CaSO4 / Ksp * 100:	0%	0%	0%
SrSO4 / Ksp * 100:	0%	0%	0%
BaSO4 / Ksp * 100:	0%	0%	0%
SiO2 saturation:	16%	16%	38%
Langelier Saturation Index	3.02	1.74	2.80
Stiff & Davis Saturation Index	2.88	1.61	2.53
Ionic strength	0.05	0.05	0.11
Osmotic pressure	14.2 psi	15.5 psi	37.1 psi

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 224.1 psi
 Feed pressure: 195.1 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 8.5 Element age: 3.0 years
 Chem dose, ppm (100%): 88.1 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 2.57 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	93.0	53.0	29.7	14.0	1.10	165.7	0.0	ESPA1	24	4x6
1-2	32.0	59.4	43.4	9.6	1.04	123.0	0.0	ESPA1	12	2x6

Stg	Elem no.	Feed pres psi	Pres drop psi	Perm flow gpm	Perm Flux gfd	Beta	Perm sal TDS	Conc osm pres	CaSO4	Concentrate saturation levels				Lang.
										SrSO4	BaSO4	SiO2		
1-1	1	195.1	6.6	4.3	15.5	1.08	30.9	16.8	0	0	0	18	1.8	
1-1	2	188.5	5.8	4.1	14.8	1.10	29.7	18.4	0	0	0	19	2.0	
1-1	3	182.7	5.1	3.9	14.2	1.10	31.0	20.1	0	0	0	21	2.1	
1-1	4	177.5	4.5	3.8	13.6	1.09	33.3	22.1	0	0	0	23	2.2	
1-1	5	173.0	3.9	3.6	13.0	1.10	36.2	24.5	0	0	0	26	2.3	
1-1	6	169.1	3.4	3.5	12.4	1.10	39.8	27.3	0	0	0	28	2.4	
1-2	1	162.7	7.9	3.2	11.5	1.05	40.8	29.1	0	0	0	30	2.5	
1-2	2	154.8	7.3	3.0	10.6	1.10	43.5	30.6	0	0	0	32	2.6	
1-2	3	147.5	6.8	2.7	9.9	1.05	46.5	32.2	0	0	0	33	2.6	
1-2	4	140.7	6.3	2.5	9.1	1.05	49.8	33.9	0	0	0	35	2.7	
1-2	5	134.3	5.9	2.4	8.5	1.05	53.4	35.6	0	0	0	36	2.8	
1-2	6	128.4	5.5	2.2	7.8	1.04	57.4	37.3	0	0	0	38	2.8	

BASIC DESIGN

RO program licensed to:	*WBates		
Calculation created by:	*Bates		
Project name:	6Y (Mueller Industries)	Permeate flow:	125.00 gpm
HP Pump flow:	211.9 gpm	Raw water flow:	211.9 gpm
Recommended pump press.:	224.1 psi		
Feed pressure:	195.1 psi	Permeate recovery:	59.0 %
Feedwater Temperature:	10.0 C(50F)		
Feed water pH:	8.5	Element age:	3.0 years
Chem dose, ppm (100%):	88.1 HCl	Flux decline % per year:	15.0
Acidified feed CO2:	2.57	Salt passage increase, %/yr:	10.0
Average flux rate:	12.5 gfd	Feed type:	Wastewater

 **** THE FOLLOWING PARAMETERS EXCEED RECOMMENDED DESIGN LIMITS: ***

Concentrate Langelier Saturation Index too high (2.80)

The following are recommended general guidelines for designing a reverse osmosis system using Hydранautics membrane elements. Please consult Hydранautics for specific recommendations for operation beyond the specified guidelines.

Feed and Concentrate flow rate limits

Element diameter	Maximum feed flow rate	Minimum concentrate rate
8.0 inches	75 gpm (283.9 lpm)	12 gpm (45.4 lpm)
8.0 inches(Full Fit)	75 gpm (283.9 lpm)	30 gpm (113.6 lpm)

Concentrate polarization factor (beta) should not exceed 1.2 for standard elements

Saturation limits for sparingly soluble salts in concentrate

Soluble salt	Saturation
BaSO4	6000%
CaSO4	230%
SrSO4	800%
SiO2	100%

Langelier Saturation Index for concentrate should not exceed 1.8

The above saturation limits only apply when using effective scale inhibitor.
 Without scale inhibitor, concentrate saturation should not exceed 100%.

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 224.2 psi
 Feed pressure: 195.2 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 8.2 Element age: 3.0 years
 Chem dose, ppm (100%): 93.1 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 5.15 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	93.0	53.0	29.7	14.0	1.10	165.8	0.0	ESPA1	24	4x6
1-2	32.0	59.4	43.4	9.6	1.04	123.0	0.0	ESPA1	12	2x6

Ion	Raw water		Feed water		Permeate		Concentrate	
	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3
Ca	332.0	827.9	332.0	827.9	8.690	21.7	797.3	1988.2
Mg	176.0	724.3	176.0	724.3	4.607	19.0	422.6	1739.3
Na	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
K	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NH4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Ba	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
Sr	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
CO3	152.0	253.3	4.9	8.2	0.007	0.0	12.0	20.0
HCO3	305.0	250.0	447.4	366.7	28.066	23.0	1050.8	861.3
SO4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Cl	744.2	1049.6	834.5	1177.1	12.487	17.6	2017.5	2845.6
F	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NO3	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
B	0.00		0.00		0.000		0.00	
SiO2	17.9		17.9		1.18		42.0	
TDS	1727.1		1812.7		55.0		4342.1	
pH	9.7		8.2		7.1		8.5	

	Raw water	Feed water	Concentrate
CaSO4 / Ksp * 100:	0%	0%	0%
SrSO4 / Ksp * 100:	0%	0%	0%
BaSO4 / Ksp * 100:	0%	0%	0%
SiO2 saturation:	16%	16%	38%
Langelier Saturation Index	3.02	1.43	2.50
Stiff & Davis Saturation Index	2.88	1.30	2.22
Ionic strength	0.05	0.05	0.11
Osmotic pressure	14.2 psi	15.5 psi	37.2 psi

These calculations are based on nominal element & component performance when operated on a feed water of acceptable quality.
 NO GUARANTEE OF SYSTEM PERFORMANCE IS EXPRESSED OR IMPLIED unless provided in writing by Hydranautics.
 Hydranautics (USA) Ph:(760)901-2500 Fax:(760)901-2578 info@hydranautics.com
 Hydranautics (Europe) Ph: 31 5465 88355 Fax: 31 5465 73288 (11/72)

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 224.2 psi
 Feed pressure: 195.2 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 8.2 Element age: 3.0 years
 Chem dose, ppm (100%): 93.1 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 5.15 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	93.0	53.0	29.7	14.0	1.10	165.8	0.0	ESPA1	24	4x6
1-2	32.0	59.4	43.4	9.6	1.04	123.0	0.0	ESPA1	12	2x6

Stg	Elem no.	Feed pres psi	Pres drop psi	Perm flow gpm	Perm Flux gfd	Beta	Perm sal TDS	Conc osm pres	CaSO4	Concentrate saturation levels				Lang.
										SrSO4	BaSO4	SiO2		
1-1	1	195.2	6.6	4.3	15.5	1.08	31.1	16.9	0	0	0	18	1.5	
1-1	2	188.6	5.8	4.1	14.8	1.10	29.8	18.4	0	0	0	19	1.6	
1-1	3	182.7	5.1	3.9	14.2	1.10	31.1	20.2	0	0	0	21	1.8	
1-1	4	177.6	4.5	3.8	13.6	1.09	33.4	22.2	0	0	0	23	1.9	
1-1	5	173.1	3.9	3.6	13.0	1.10	36.3	24.6	0	0	0	26	2.0	
1-1	6	169.2	3.4	3.5	12.4	1.10	39.9	27.4	0	0	0	28	2.1	
1-2	1	162.8	7.9	3.2	11.5	1.05	40.9	29.1	0	0	0	30	2.2	
1-2	2	154.9	7.3	3.0	10.6	1.10	43.7	30.7	0	0	0	32	2.3	
1-2	3	147.5	6.8	2.7	9.9	1.05	46.7	32.3	0	0	0	33	2.3	
1-2	4	140.7	6.3	2.5	9.1	1.05	50.0	34.0	0	0	0	35	2.4	
1-2	5	134.4	5.9	2.3	8.5	1.05	53.6	35.7	0	0	0	36	2.5	
1-2	6	128.5	5.5	2.2	7.8	1.04	57.6	37.4	0	0	0	38	2.5	

BASIC DESIGN

RO program licensed to:	*WBates		
Calculation created by:	*Bates		
Project name:	6Y (Mueller Industries)	Permeate flow:	125.00 gpm
HP Pump flow:	211.9 gpm	Raw water flow:	211.9 gpm
Recommended pump press.:	224.2 psi		
Feed pressure:	195.2 psi	Permeate recovery:	59.0 %
Feedwater Temperature:	10.0 C(50F)		
Feed water pH:	8.2	Element age:	3.0 years
Chem dose, ppm (100%):	93.1 HCl	Flux decline % per year:	15.0
Acidified feed CO2:	5.15	Salt passage increase, %/yr:	10.0
Average flux rate:	12.5 gfd	Feed type:	Wastewater

 **** THE FOLLOWING PARAMETERS EXCEED RECOMMENDED DESIGN LIMITS: ***

Concentrate Langelier Saturation Index too high (2.50)

The following are recommended general guidelines for designing a reverse osmosis system using Hydranautics membrane elements. Please consult Hydranautics for specific recommendations for operation beyond the specified guidelines.

Feed and Concentrate flow rate limits

Element diameter	Maximum feed flow rate	Minimum concentrate rate
8.0 inches	75 gpm (283.9 lpm)	12 gpm (45.4 lpm)
8.0 inches(Full Fit)	75 gpm (283.9 lpm)	30 gpm (113.6 lpm)

Concentrate polarization factor (beta) should not exceed 1.2 for standard elements

Saturation limits for sparingly soluble salts in concentrate

Soluble salt	Saturation
BaSO4	6000%
CaSO4	230%
SrSO4	800%
SiO2	100%

Langelier Saturation Index for concentrate should not exceed 1.8

The above saturation limits only apply when using effective scale inhibitor.
 Without scale inhibitor, concentrate saturation should not exceed 100%.

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries)
 HP Pump flow: 211.9 gpm
 Recommended pump press.: 224.2 psi
 Feed pressure: 195.2 psi
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 7.8
 Chem dose, ppm (100%): 101.2 HCl
 Acidified feed CO2: 12.71
 Average flux rate: 12.5 gfd

Permeate flow: 125.00 gpm
 Raw water flow: 211.9 gpm
 Permeate recovery: 59.0 %
 Element age: 3.0 years
 Flux decline % per year: 15.0
 Salt passage increase, %/yr: 10.0
 Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	93.0	53.0	29.7	14.0	1.10	165.8	0.0	ESPA1	24	4x6
1-2	32.0	59.4	43.4	9.6	1.04	123.0	0.0	ESPA1	12	2x6

Ion	Raw water		Feed water		Permeate		Concentrate	
	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3	mg/l	CaCO3
Ca	332.0	827.9	332.0	827.9	8.644	21.6	797.3	1988.3
Mg	176.0	724.3	176.0	724.3	4.582	18.9	422.7	1739.4
Na	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
K	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NH4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Ba	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
Sr	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0
CO3	152.0	253.3	1.9	3.2	0.003	0.0	4.7	7.8
HCO3	305.0	250.0	439.9	360.6	27.604	22.6	1033.3	847.0
SO4	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
Cl	744.2	1049.6	842.3	1188.1	12.606	17.8	2036.4	2872.2
F	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
NO3	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0
B	0.00		0.00		0.000		0.00	
SiO2	17.9		17.9		1.18		42.0	
TDS	1727.1		1810.1		54.6		4336.3	
pH	9.7		7.8		6.7		8.1	

	Raw water	Feed water	Concentrate
CaSO4 / Ksp * 100:	0%	0%	0%
SrSO4 / Ksp * 100:	0%	0%	0%
BaSO4 / Ksp * 100:	0%	0%	0%
SiO2 saturation:	16%	16%	38%
Langelier Saturation Index	3.02	1.02	2.08
Stiff & Davis Saturation Index	2.88	0.89	1.81
Ionic strength	0.05	0.05	0.11
Osmotic pressure	14.2 psi	15.5 psi	37.2 psi

These calculations are based on nominal element & component performance when operated on a feed water of acceptable quality.
 NO GUARANTEE OF SYSTEM PERFORMANCE IS EXPRESSED OR IMPLIED unless provided in writing by Hydranautics.
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 Hydranautics (Europe) Ph: 31 5465 88355 Fax: 31 5465 73288 (11/72)

BASIC DESIGN

RO program licensed to: *WBates
 Calculation created by: *Bates
 Project name: 6Y (Mueller Industries) Permeate flow: 125.00 gpm
 HP Pump flow: 211.9 gpm Raw water flow: 211.9 gpm
 Recommended pump press.: 224.2 psi
 Feed pressure: 195.2 psi Permeate recovery: 59.0 %
 Feedwater Temperature: 10.0 C(50F)
 Feed water pH: 7.8 Element age: 3.0 years
 Chem dose, ppm (100%): 101.2 HCl Flux decline % per year: 15.0
 Acidified feed CO2: 12.71 Salt passage increase, %/yr: 10.0
 Average flux rate: 12.5 gfd Feed type: Wastewater

Stage	Perm. Flow gpm	Flow/Vessel Feed gpm	Conc gpm	Flux gfd	Beta	Conc.&Throt. Pressures psi	psi	Element Type	Elem. No.	Array
1-1	93.0	53.0	29.7	14.0	1.10	165.8	0.0	ESPA1	24	4x6
1-2	32.0	59.4	43.4	9.6	1.04	123.0	0.0	ESPA1	12	2x6

Stg	Elem no.	Feed pres psi	Pres drop psi	Perm flow gpm	Perm Flux gfd	Beta	Perm sal TDS	Conc osm pres	CaSO4	Concentrate saturation levels				Lang.
										SrSO4	BaSO4	SiO2		
1-1	1	195.2	6.6	4.3	15.5	1.08	30.8	16.9	0	0	0	18	1.1	
1-1	2	188.6	5.8	4.1	14.8	1.10	29.6	18.4	0	0	0	19	1.2	
1-1	3	182.7	5.1	3.9	14.2	1.10	30.9	20.2	0	0	0	21	1.3	
1-1	4	177.6	4.5	3.8	13.6	1.09	33.1	22.2	0	0	0	23	1.5	
1-1	5	173.1	3.9	3.6	13.0	1.10	36.0	24.6	0	0	0	26	1.6	
1-1	6	169.2	3.4	3.5	12.4	1.10	39.6	27.4	0	0	0	28	1.7	
1-2	1	162.8	7.9	3.2	11.5	1.05	40.6	29.1	0	0	0	30	1.8	
1-2	2	154.9	7.3	3.0	10.6	1.10	43.3	30.7	0	0	0	32	1.9	
1-2	3	147.5	6.8	2.7	9.9	1.05	46.3	32.3	0	0	0	33	1.9	
1-2	4	140.7	6.3	2.5	9.1	1.05	49.6	34.0	0	0	0	35	2.0	
1-2	5	134.4	5.9	2.3	8.5	1.05	53.2	35.7	0	0	0	36	2.0	
1-2	6	128.5	5.5	2.2	7.8	1.04	57.1	37.4	0	0	0	38	2.1	

These calculations are based on nominal element & component performance when operated on a feed water of acceptable quality.
 NO GUARANTEE OF SYSTEM PERFORMANCE IS EXPRESSED OR IMPLIED unless provided in writing by Hydranautics.

Hydranautics (USA) Ph:(760)901-2500 Fax:(760)901-2578 info@hydranautics.com

Hydranautics (Europe) Ph: 31 5465 88355 Fax: 31 5465 73288 (11/72)

BASIC DESIGN

RO program licensed to:	*WBates		
Calculation created by:	*Bates		
Project name:	6Y (Mueller Industries)	Permeate flow:	125.00 gpm
HP Pump flow:	211.9 gpm	Raw water flow:	211.9 gpm
Recommended pump press.:	224.2 psi		
Feed pressure:	195.2 psi	Permeate recovery:	59.0 %
Feedwater Temperature:	10.0 C(50F)		
Feed water pH:	7.8	Element age:	3.0 years
Chem dose, ppm (100%):	101.2 HCl	Flux decline % per year:	15.0
Acidified feed CO2:	12.71	Salt passage increase, %/yr:	10.0
Average flux rate:	12.5 gfd	Feed type:	Wastewater

 *** THE FOLLOWING PARAMETERS EXCEED RECOMMENDED DESIGN LIMITS: ***

Concentrate Langelier Saturation Index too high (2.08)

The following are recommended general guidelines for designing a reverse osmosis system using Hydranautics membrane elements. Please consult Hydranautics for specific recommendations for operation beyond the specified guidelines.

Feed and Concentrate flow rate limits

Element diameter	Maximum feed flow rate	Minimum concentrate rate
8.0 inches	75 gpm (283.9 lpm)	12 gpm (45.4 lpm)
8.0 inches(Full Fit)	75 gpm (283.9 lpm)	30 gpm (113.6 lpm)

Concentrate polarization factor (beta) should not exceed 1.2 for standard elements

Saturation limits for sparingly soluble salts in concentrate

Soluble salt	Saturation
BaSO4	6000%
CaSO4	230%
SrSO4	800%
SiO2	100%

Langelier Saturation Index for concentrate should not exceed 1.8

The above saturation limits only apply when using effective scale inhibitor.
 Without scale inhibitor, concentrate saturation should not exceed 100%.



**MAR COR
PURIFICATION**
A Contel Medical Company

Filtration, Water, and Disinfection Technologies

Biolab Equipment Ltd.

APPENDIX C REVERSE OSMOSIS MEMBRANE DATA SHEETS

Membrane Element

ESPA1

Performance:	Permeate Flow:	12,000 gpd (45.4 m ³ /d)
	Salt Rejection (Nominal):	99.3 %
	(Minimum):	99.0%

Type	Configuration:	Spiral Wound
	Membrane Polymer:	Composite Polyamide
	Nominal Membrane Area:	400 ft ²

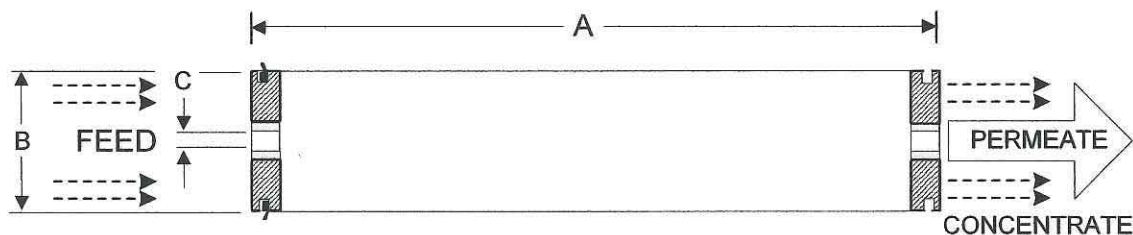
Application Data*	Maximum Applied Pressure:	600 psig (4.16 MPa)
	Maximum Chlorine Concentration:	< 0.1 PPM
	Maximum Operating Temperature:	113 °F (45 °C)
	Feedwater pH Range:	3.0 - 10.0
	Maximum Feedwater Turbidity:	1.0 NTU
	Maximum Feedwater SDI (15 mins):	5.0
	Maximum Feed Flow:	75 GPM (17.0 m ³ /h)
	Minimum Ratio of Concentrate to Permeate Flow for any Element:	5:1
	Maximum Pressure Drop for Each Element:	10 psi

* The limitations shown here are for general use. The values may be more conservative for specific projects to ensure the best performance and longest life of the membrane.

Test Conditions

The stated performance is initial (data taken after 30 minutes of operation), based on the following conditions:

1500 PPM NaCl solution
 150 psi (1.05 MPa) Applied Pressure
 77 °F (25 °C) Operating Temperature
 15% Permeate Recovery
 6.5 - 7.0 pH Range



A, inches (mm)	B, inches (mm)	C, inches (mm)	Weight, lbs. (kg)
40.0 (1016)	7.95 (201.9)	1.125 (28.6)	36 (16.4)

Notice: Permeate flow for individual elements may vary + 25 or - 15 percent. All membrane elements are supplied with a brine seal, interconnector, and o-rings. Elements are enclosed in a sealed polyethylene bag containing less than 1.0% sodium meta-bisulfite solution and 10% propylene glycol, and then packaged in a cardboard box.

Hydranautics believes the information and data contained herein to be accurate and useful. The information and data are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. Hydranautics assumes no liability for results obtained or damages incurred through the application of the presented information and data. It is the user's responsibility to determine the appropriateness of Hydranautics' products for the user's specific end uses. 3/22/07



HIGH PURITY WATER SYSTEM PREVENTATIVE MAINTENANCE SAMPLE

Date:	Fax Number:
Company:	Customer Number:
Attention:	Number of pages: 9
Reference: Maintenance Contract	Expiry Date: June 30, 2011
Where:	Present P.O.:

DESCRIPTION

PRICE

Preventative maintenance contract, **12 visits** per year, for the next 3 years until June 30, 2011.

July 1, 2008 to June 30th 2009

Labour

Visits will be conducted monthly.

IMPORTANT

1. Please provide a purchase order. Upon reception of a purchase order, prices will be valid from month/year to month/year.
2. Please sign the contract and return by fax at (905) 639-0425 or e-mail to ssmith@mcpur.com.

TERMS AND CONDITIONS:

F.O.B. Burlington, Ontario, G.S.T. and P.S.T. are extra (if applicable), net 30 days.

Hoping all is satisfactory; please do not hesitate to contact us for more detailed information.

MAR COR PURIFICATION / BIOLAB EQUIPMENT

MAINTENANCE AGREEMENT

WITH

MAR COR PURIFICATION / BIOLAB EQUIPMENT

Type of equipment: Water System _____

Purchase order number: _____

Customer Signature: _____ **Date:** _____

Lee Carlson
Midwest Sales Manager:

Date:

PURPOSE OF THE PLAN

MAR COR PURIFICATION / BIOLAB EQUIPMENT maintenance agreement plans are designed to maximize equipment life through periodic inspection, cleaning, lubricating and adjustment, as may be required.

Parts Required

With exception to any parts originally under warranty with the manufacturer, any required part, membrane and/or filter will be the customer's responsibility, **unless specified in Preventative Maintenance Agreement.**

SYSTEMS COVERED BY THE MAINTENANCE AGREEMENT PLANS

Water systems that do not have a MAR COR PURIFICATION / BIOLAB EQUIPMENT maintenance agreement plan in effect at start-up must be inspected by the Technical Service Department of MAR COR PURIFICATION / BIOLAB EQUIPMENT and, refurbished if necessary. The costs of refurbishment will be charged at standard labour rates, plus mileage, plus parts. Following refurbishment of the system, a MAR COR PURIFICATION / BIOLAB EQUIPMENT maintenance agreement plan may be offered.

MAR COR PURIFICATION / BIOLAB EQUIPMENT will perform the services listed on the specified system providing the system is operated in accordance with the manufacturer's recommendations.

MAINTENANCE AGREEMENT WHAT IT COVERS

Functions to be performed during the MAR COR PURIFICATION / BIOLAB EQUIPMENT maintenance agreement plan visit:

Water Chemistry Tests - Field Versions (Hach Kits)

- pH of feed and RO product water
- Alkalinity
- Hardness / before and after softeners
- Iron
- Free and total chlorine before and after chlorine removal i.e.: carbon / sodium metabisulfite
- Temperature

Water Quality Testing

Specific Conductivity (uS/cm)

- a. Feed water
- b. Permeate and/or product
- c. Distribution

Mechanical Verification and Adjustment of Complete System

- All associated pumps, including lubrication
- Control valve
- Timers
- Pressure switches
- Pressure gauges
- Percent rejection
- Percent recovery

Electrical Verification of Complete Control System

- Control panel (box) functions
- Protection device (i.e. low pressure shutoff)
- Anti Scalent Injection
- Bisulfite Injection
- Acid Injection
- Interlocks
- Cycling Functions

Component Service and/or Replacement (Materials Supplied)

- Prefilter(s) changed – Monthly – 10 micron Pretreatment Skid & 5 micron BKT Skid
- RO Cleaning, – 4 Annually
- Thornton pH and ORP probe replacement – 1 Annually

- BKT pump seal replacement – 1 Annually
- Grundfos chemical dosing pump seal/diaphragm replacement – 1 Annually

Labor

- No additional charges for labour or mileage during scheduled visits.

A written report is prepared as part of each scheduled visit.

ADDITIONAL SERVICES

Additional emergency or service visits are billed at the following rates with Service Contract. **These rates reflect a 10% discount on labor.**

Monthly Maintenance Work Breakdown

- Month 1 -- Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
- Month 2 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
- Month 3 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
Cleaning of Reverse Osmosis section of RODI
- Month 4 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water

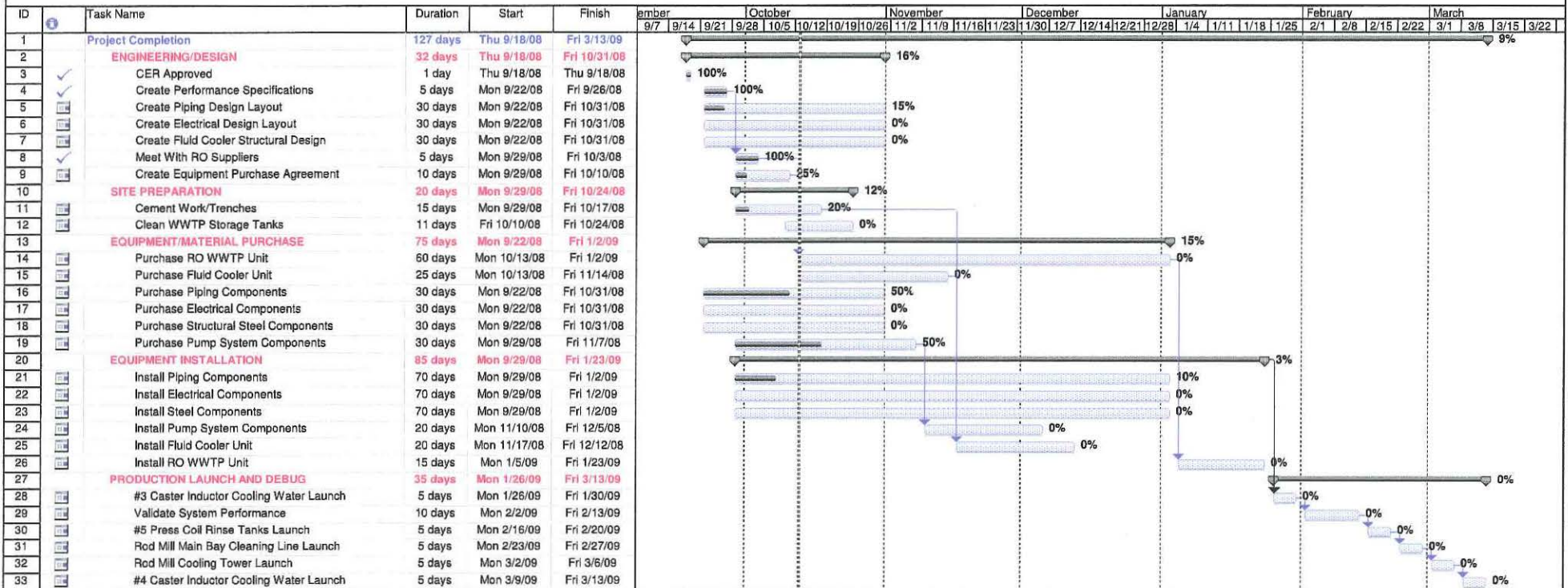
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids

- Month 5 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
Final 0.1 um Filter Change
- Month 6 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
Cleaning of Reverse Osmosis section of RODI
- Month 7 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
- Month 8 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
- Month 9 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
Cleaning of Reverse Osmosis section of RODI
- Month 10 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System

Pre-Filter Changing on Pretreatment and BKT Skids

- Month 11 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
Calibrate 2 Thornton Meters
- Month 12 - Data Collection/ Review Data Collection
Water Chemistry and Quality Testing of Feed and Product Water
Mechanical Verification of Complete System
Electrical Verification of Control System
Pre-Filter Changing on Pretreatment and BKT Skids
Cleaning of Reverse Osmosis Section of RODI
Replacement of Thornton pH Probe
Replacement of Thornton ORP Probe
Replacement of BKT Booster Pump Seal
Replacement of Grundfos Chemical dosing Pumps Seal Kit

REVERSE OSMOSIS WATER TREATMENT SYSTEM Port Huron Rod Mill



Project: Reverse Osmosis Water Treat
Date: Mon 10/13/08



Task

Split

Progress

Milestone

Summary

Rolled Up Task

Rolled Up Split

Rolled Up Milestone

Rolled Up Progress

External Tasks

Project Summary

External Milestone

Deadline

October 8, 2012

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Annual SEP Summary Report – 3rd Year

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company, U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file an annual SEP summary report within sixty days after the 2nd, 3rd, 4th, and 5th anniversaries of beginning operation of the reverse osmosis system. Construction was considered complete on 9/28/2009. This being the 3rd annual report submitted summarizes the operation period between 9/28/2011 and 9/28/2012.

Pursuant to paragraph 85 item D the following is a listing of the requested information for the reporting period:

- i. A detailed description of the SEP as implemented
- ii. An audit of SEP expenditures, including but not limited to, itemized costs for the SEP, documented by copies of purchase orders and receipts or canceled checks
- iii. Certification that the SEP has been implemented pursuant to the provisions of this CAFO
- iv. A description of the environmental and public health benefits resulting from implementation of the SEP and a best estimate quantification of the benefits and pollution reductions obtained.

Enclosed you will find the response to each piece of information requested.

Sincerely,



Kevin Pedler
EHS Manager
Mueller Brass Company
810-434-2713

A DETAILED DESCRIPTION OF THE SUPPLEMENTAL ENVIRONMENTAL PROJECT AS IMPLEMENTED

A reverse osmosis system (ROS) was added to the existing metal detoxification wastewater treatment system at Mueller Brass Company's Port Huron, MI facility as a result of a Supplemental Environmental Project negotiated in conjunction with a Consent Agreement and final Order (CAFO) from Region V of the United States Environmental Protection Agency Docket No. RCRA-05-2008-0016.

The existing metal detoxification wastewater treatment system receives rinse waters from the facility which are cycled through the following processes: homogenization, neutralization/ precipitation, flocculation, clarification and sand filtration. The ROS was added to reduce the amount of metals left in the discharge from the metal detoxification system sand filter. As operating today, the ROS consists of the following sequence: Ph adjustment, homogenization, media filtration, water softening, cartridge filtration and reverse osmosis.

The system is engineered to use either discharge water from the metal detoxification system sand filter or capture storm water runoff. Storm water runoff is fed directly to the ROS or is sent to plant processes for cooling and then becomes incorporated into the flow that is processed through the metal detoxification system.

The primary feed for the ROS is the discharge water from the metal detoxification system sand filter. The system is designed to remove metal that remains in solution (was not precipitated) from the metal detoxification system. The treated water from the ROS is either discharged to the City of Port Huron Reclamation Treatment Plant or recycled to Mueller Brass plant processes for reuse. The reject flow from the ROS is sent to the front of the metal detoxification system for retreatment.

This statement and the above description are to serve as certification that the SEP has been implemented pursuant to the provisions of the Consent Agreement and Final Order Docket No. RCRA-05-2008-0016.

S. High
Signature

10/17/12
Date

**AN AUDIT OF SEP EXPENDITURES INCLUDING AN
ITEMIZED LIST AND INDIVIDUAL PURCHASE
ORDERS**

PO #	PO Date	Supplier	Part #	Description	Quantity	Unit	Unit Price	Tax \$	Line Total
Status: APPR									
R442	7/3/2012	10985	NS-182574	VECTOR CONTINUOUS FLOW BROMINE FEEDER. THIS IS A 50LB FEEDER WITH A 1 INCH INLET AND OUTLET. PART NUMBER 10071276 BROMINE FEEDER	1.00	EA	1,075.00	0.00	1,075.00
			NS-182575	FLOWMETER MAINIFOLD FOR CONTINUOUS FEED 1-10GPM	1.00	EA	124.00	0.00	124.00
Subtotal									1,199.00
Status: APPR Total									1,199.00
Status: COMP									
R41648	10/18/2011	M9434	816667	CLAMP - HOSE, 1/2", STAINLESS STEEL, P/N HSS 8 DIXON OR 6808 IDEAL	30.00	EA	0.68	0.00	20.40
			924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	90.00	EA	5.10	0.00	459.00
Subtotal									479.40
R41705	10/21/2011	G0350	NS-175676	TEE - 3" SCH80 PVC SOCKET WELD	1.00	EA	11.17	0.00	11.17
			NS-175677	FLANGE -	2.00	EA	11.87	0.00	23.74
Subtotal									34.91
R42146	12/15/2011	G0350	NS-177222	3" PVC BUTTERFLY VALVE	1.00	EA	207.68	0.00	207.68
Subtotal									207.68
R45829	1/18/2012	M3857	920241	COUPLING - POLYPROPYLENE, 1 1/2", FEMALE NPT X PLUG, "A" ADAPTER, MCMaster P/N 5535K33	1.00	EA	2.69	0.00	2.69
			NS-178223	BRASS HOOKS	12.00	EA	2.33	0.00	27.96
			NS-178224	ILLUMINATED MAGNIFIER	1.00	EA	172.92	0.00	172.92
Subtotal									203.57
R45974	1/27/2012	10252	NS-162154	REVERSE OSMOSIS MEMBRANE ELEMENT 8" X 40" - (HYDRANAUTICS)	36.00	EA	560.26	0.00	20,169.36
Subtotal									20,169.36
R46243	2/15/2012	D1000	NS-179330	MOVE, ASSEMBLE AND INSTALL OFFICE EQUIPMENT IN ENGINEERING OFFICES	1.00	EA	500.00	0.00	500.00
			NS-179329	Change 36 filters in Wastewater at R.O UNIT	1.00	EA	728.00	0.00	728.00
			NS-179328	CHECK LINE UP OF TUNDISH ON #4 CASTER	1.00	EA	988.00	0.00	988.00
			NS-179327	Install fiber-optic comm. cable from Forging warehouse to Rod Mill along phone poles.	1.00	EA	2,900.00	0.00	2,900.00
Subtotal									5,116.00
R46300	2/13/2012	M3857	NS-179247	1" PVC UNION NPT TONPT BRAND IS +GF+ (FOR RO UNIT)	10.00	EA	9.33	0.00	93.30
Subtotal									93.30
R46362	2/22/2012	B1302	NS-179588	GF PART NUMBER 161.346.314 VALVE (FOR PNEUMATIC CART VALVE GF # 199.223.135) PVC	2.00	EA	34.78	0.00	69.56
Subtotal									69.56
R46518	3/5/2012	G0350	NS-180000	P80SFBMK 3 X 2 PVC SCH80 SXF BUSH	1.00	EA	16.31	0.00	16.31
Subtotal									16.31
R46609	3/12/2012	B1302	NS-179867	SIGNET 1" PVC CORE, PART 346 EPDM (NUMBER 161.483.933)	3.00	EA	46.90	0.00	140.70

PO #	PO Date	Supplier	Part #	Description	Quantity	Unit	Unit Price	Tax \$	Line Total
Status: COMP Continued									
Subtotal									140.70
R46610	3/12/2012	M9434	803672	BELT - "V", 3L350 DODGE, 1350 GATES,	1.00	EA	3.00	0.00	3.00
				3L350 BROWNING					
			920011	FITTING - HOSE MENDER, 1/4", AEROQUIP	6.00	EA	3.62	0.00	21.72
				P/N 4772-4B					
			816667	CLAMP - HOSE, 1/2", STAINLESS STEEL,	30.00	EA	0.79	0.00	23.70
				P/N HSS 8 DIXON OR 6808 IDEAL					
			865355	TEFLON - LIQUID, LOCTITE P/N 59231	3.00	EA	10.40	0.00	31.20
			920732	SLEEVE - FOR #8 SURE-FLEX STD.	2.00	EA	27.12	0.00	54.24
				COUPLINGS, P/N 8JES					
			659048	BLADE - HACK SAW, POWER, 21 X 1 3/4, 4	2.00	EA	26.57	0.00	53.14
				TOOTH, P/N 40126					
			924199	FILTER - POLY, 3 MICRON, 30" LONG,	90.00	EA	5.10	0.00	459.00
				SHELCO P/N SMB3-30					
			500513	KIT - FLUID ANALYSIS, VICKERS P/N	8.00	EA	58.37	0.00	466.96
				894276N FOR 5 EXT FOR OIL SAMPLE					
			950380	BRAKE - STEARNS BRAKE ASSEMBLY	1.00	EA	1,792.95	0.00	1,792.95
				COMPLETE, P/N 1-087-061-00-122 SPECIFY					
				460V, FOR SCHUMAG CRANES					
			950717	CLUTCH - MODEL 14", POWER-FLO	1.00	EA	4,468.30	0.00	4,468.30
				SERIAL # 23530, 3 SCHUMAG. CLUTCH					
				MUST BE DYNAMICALLY BALANCED					
				ROUGH BORE					
Subtotal									7,374.21
R47539	5/15/2012	M9434	843121	LUBRICANT - LPS 2, LPS P/N 00216	6.00	CN	8.21	0.00	49.26
			920584	LINK - MASTER, MORSE 140H	6.00	EA	11.55	0.00	69.30
				CONNECTOR LINK C/L C/P P/F 2PB, 322449					
				FOR SHREDDER					
			920336	LUBRICANT - OPEN CHAIN, 12 PER CASE,	24.00	EA	3.99	0.00	95.76
				P/N S00202					
			948593	LUBRICANT - NEVER-SEEZ &	5.00	EA	8.93	0.00	44.65
				LUBRICATING COMPOUND, P/N NSBT-8N 8					
				OZ. HI HEAT UP TO 2400 F, LOCTITE 51147.					
			920516	"O" RING - 1/4 X 13 1/2 X 14, 10 PER. PKG.,	10.00	EA	1.28	0.00	12.80
				P/N 568-456 MOLDS					
			659048	BLADE - HACK SAW, POWER, 21 X 1 3/4, 4	2.00	EA	26.57	0.00	53.14
				TOOTH, P/N 40126					
			924199	FILTER - POLY, 3 MICRON, 30" LONG,	90.00	EA	5.10	0.00	459.00
				SHELCO P/N SMB3-30					
			832344	FILTER - AIR, THROWAWAY, 10 1/2" X 23	20.00	EA	5.07	0.00	101.40
				1/2" X 1/2"					
			920080	LINK - MASTER, CONNECTING FOR #35	4.00	EA	0.65	0.00	2.60
				ROLLER CHAIN, 3/8 PITCH, P/N 35					
Subtotal									887.91
R47602	5/22/2012	M9434	606405	DEGREASER - NATURAL BLUE, LOCTITE,	2.00	EA	17.58	0.00	35.16
				P/N 82251 - 1 GALLON					
			832440	FILTER - AIR, THROWAWAY, 16" X 20" X 1"	24.00	EA	1.47	0.00	35.28
			924199	FILTER - POLY, 3 MICRON, 30" LONG,	90.00	EA	5.10	0.00	459.00
				SHELCO P/N SMB3-30					
Subtotal									529.44
R47628	5/25/2012	G0350	NS-182505	SHELCO SPRING AND SEAL ASSY	6.00	EA	18.70	0.00	112.20
Subtotal									112.20
R47697	6/4/2012	M9434	924199	FILTER - POLY, 3 MICRON, 30" LONG,	90.00	EA	5.10	0.00	459.00
				SHELCO P/N SMB3-30					
			946068	COUPLING - FOR ENCODER ON	1.00	EA	47.73	0.00	47.73
				GANG-SAW, LOVEJOY P/N EC112-3/8					
Subtotal									506.73
R47741	6/12/2012	M9434	606405	DEGREASER - NATURAL BLUE, LOCTITE,	2.00	EA	17.58	0.00	35.16
				P/N 82251 - 1 GALLON					

PO #	PO Date	Supplier	Part #	Description	Quantity	Unit	Unit Price	Tax \$	Line Total
Status: COMP Continued									
			600401	SEALANT - SILICONE -LOCTITE, P/N 82046, 11 OUNCE ULTRA COPPER HIGH TEMP. RTV SILICONE GASKET SEALANT	1.00	EA	13.89	0.00	13.89
			837816	HOSE - WATER, 3/8", 2 BRAID, 300 PSI, GOODYEAR P/N 3/8BKWINGF300RL	150.00	FT	1.96	0.00	294.00
			924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	90.00	EA	5.10	0.00	459.00
			803984	BELT - "V", A35 NO SUBS. REPLACES 4L370.	1.00	EA	3.64	0.00	3.64
			920921	BELT - TIMING, P/N 1800-XXH-500 WOODS FOR 16" LOMA SAW, BILLET SAW	1.00	EA	636.71	0.00	636.71
			946068	COUPLING - FOR ENCODER ON GANG-SAW, LOVEJOY P/N EC112-3/8	1.00	EA	47.73	0.00	47.73
			843121	LUBRICANT - LPS 2, LPS P/N 00216	6.00	CN	8.21	0.00	49.26
			816740	CLAMP - HOSE, 3/4", STAINLESS STEEL, DIXON P/N HSS12	60.00	EA	0.79	0.00	47.40
Subtotal									1,586.79
R47762	6/13/2012	M9434	832408	FILTER - AIR, THROWAWAY, 10" X 10" X 1" FIBERGLASS	12.00	EA	1.58	0.00	18.96
			921176	BEARING - P/N 205 KD FAFNIR, 7505 NEW DEPARTURE, 6205Z SKF OR 205SF MRC	2.00	EA	10.83	0.00	21.66
			948593	LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147.	5.00	EA	8.93	0.00	44.65
			924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	90.00	EA	5.10	0.00	459.00
Subtotal									544.27
R47826	6/20/2012	M9434	920009	FITTING - HOSE MENDER, 3/8", AEROQUIP P/N 4772-6B	10.00	EA	3.21	0.00	32.10
			920336	LUBRICANT - OPEN CHAIN, 12 PER CASE, P/N S00202	24.00	EA	3.99	0.00	95.76
			920093	LINK - MASTER, CONNECTING FOR #50 CHAIN, P/N 50 L/B OR REX OR MORSE	6.00	EA	1.04	0.00	6.24
			924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	90.00	EA	5.10	0.00	459.00
Subtotal									593.10
R47927	7/2/2012	M9434	606405	DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON	2.00	EA	17.58	0.00	35.16
			948593	LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147.	5.00	EA	8.93	0.00	44.65
			924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	90.00	EA	5.10	0.00	459.00
Subtotal									538.81
R48380	8/22/2012	M9249	NS-184789	SOFTENER PELLETS 50#	49.00	EA	6.45	0.00	316.05
			NS-184790	DELIVERY CHARGE	1.00	EA	15.00	0.00	15.00
Subtotal									331.05
R48466	9/4/2012	M9434	816650	CLAMP - HOSE, 1/4", P/N 6203 IDEAL OR MH6 DIXON	5.00	EA	0.45	0.00	2.25
			921544	CASTER - SWIVEL, 8" X 3" X 10 1/8" FOR #3 FURNACE ASH HOPPER	1.00	EA	95.59	0.00	95.59
			921545	CASTER - RIGID, 8" X 3" X 10 1/8", FOR #3 FURNACE ASH HOPPER	2.00	EA	55.28	0.00	110.56
			924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	90.00	EA	5.10	0.00	459.00
			500513	KIT - FLUID ANALYSIS, VICKERS P/N 894277-P FOR 5 EXT FOR OIL SAMPLE @ \$72.50/EACH	8.00	EA	72.05	0.00	576.40
Subtotal									1,243.80
R48583	9/17/2012	M9434	816650	CLAMP - HOSE, 1/4", P/N 6203 IDEAL OR MH6 DIXON	5.00	EA	0.45	0.00	2.25

PO #	PO Date	Supplier	Part #	Description	Quantity	Unit	Unit Price	Tax \$	Line Total
Status: COMP Continued									
			803672	BELT - "V", 3L350 DODGE, 1350 GATES, 3L350 BROWNING	1.00	EA	3.00	0.00	3.00
			803983	BELT - "V", A34.	1.00	EA	3.58	0.00	3.58
			816649	CLAMP - HOSE, 5/16", P/N 6202 IDEAL OR MH4 DIXON	10.00	EA	0.45	0.00	4.50
			943429	ADHESIVE - "O" RING, P/N 46551 LOCTITE 404	3.00	EA	13.58	0.00	40.74
			659056	BLADE - HACK SAW, POWER, 21 X 1 3/4, 6 TOOTH, P/N 61255 OR BS2106-8	2.00	EA	26.57	0.00	53.14
			921544	CASTER - SWIVEL, 8" X 3" X 10 1/8" FOR #3 FURNACE ASH HOPPER	1.00	EA	95.59	0.00	95.59
			924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	90.00	EA	5.10	0.00	459.00
			944132	VALVE - REXROTH, 4-WAY HYDRAULIC, FOR MARX STOMPER HOOD, P/N 4WE10J3X/CG24N9K4	1.00	EA	583.34	0.00	583.34
								Subtotal	1,245.14
RX1047	5/29/2012	10985	NS-182574	VECTOR CONTINUOUS FLOW BROMINE FEEDER. THIS IS A 50LB FEEDER WITH A 1 INCH INLET AND OUTLET. PART NUMBER 10071276 BROMINE FEEDER	1.00	EA	1,075.00	0.00	1,075.00
			NS-182575	FLOWMETER MAINIFOLD FOR CONTINUOUS FEED 1-10GPM	1.00	EA	124.00	0.00	124.00
								Subtotal	1,199.00
								Status: COMP Total	43,223.24
Status: MTCH									
R46602	3/12/2012	H1000	NS-178524	2 GPM SKID MOUNTED METAL ABSORPTION PILOT UNIT	1.00	EA	2,500.00	0.00	2,500.00
			NS-178525	50 LB BAG OF BAYOXIDE PRODUCT	1.00	EA	800.00	0.00	800.00
								Subtotal	3,300.00
R46602	3/12/2012	H1000	NS-180128	COST OF LABOR, MATERIAL, AND EQUIPMENT TO ROLL A 20" PIPE, CLEAN AND USE EXISTING FLANGE, DRILL AND TAP HOLES, AND INSTALL ON THE #4 TUNDISH LID	1.00	JO	1,616.00	0.00	1,616.00
								Subtotal	1,616.00
								Status: MTCH Total	4,916.00
								Grand Total	49,338.24

PO # = "R45974" "R42146" "R46300" "R46243" "R46518" "R47942" "RX1047" "R48380" "R46362" "R46609" "R46602" "R47628" "R41705" "R47697" "R47741" "R47762" "R47826" "R47927" "R48466" "R48583" "R46610" "R47539" "R47602" "R41648" "R45829" "R45962"

MUELLER BRASS CO.

Department 2100

Cost Center 5500

Account 66810

Print Date 10/8/2012

Receiving Instructions

A JOTED BY RON JOHNSTON - SAME EQUIPMENT AS REQ # 12-00074

<u>Line</u>	<u>Part/Description</u>	<u>Req'd/PO #</u>	<u>Quantity</u>	<u>Unit</u>	<u>Price</u>	<u>Line Net</u>
1	NS-182574 VECTOR CONTINUOUS FLOW BROMINE FEEDER. THIS IS A 50LB FEEDER WITH A 1 INCH INLET AND OUTLET. PART NUMBER 10071276 BROMINE FEEDER Supplier: 10985 - CHEM-AQUA 8006310990 Task: 127094*2 Account: 66810	05/27/12 R47942	1.00	EA	\$1,075.00	\$1,075.00
2	NS-182575 FLOWMETER MAINIFOLD FOR CONTINUOUS FEED 1-10GPM Supplier: 10985 - CHEM-AQUA 8006310990 Task: 127094*2 Account: 66810	05/27/12 R47942	1.00	EA	\$124.00	\$124.00

Order Net	\$1,199.00
Tax	\$0.00
Total	\$1,199.00

Requested by DAVE STRUBLE (DSTRUBLE)

Date 7/2/2012

Approved By DIANE LANGOLF (DLANGOLF)

Date 7/3/2012

S. lierShip ToBill To

CHEM-AQUA
1331 WEST LAKE DRIVE
NOVI, MI 48377

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms

Phone Number (800) 631-0990

Fax Number (248) 960-1409

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To		1/26/2012		

PRICE DOES NOT INCLUDE FREIGHT. THIS IS A PILOT PROGRAM AND THIS AMOUNT WOULD BE DEDUCTED FROM FULL SCALE PRICING IF WE PURSUE IT.

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-178524 2 GPM SKID MOUNTED METAL ABSORPTION PILOT UNIT GOODELL Task #: 173748*1 Required: 02/28/12 Requested By: Stephanie Goodell (SGOODELL)	1.00	EA	\$2,500.00	\$2,500.00	\$0.00	\$2,500.00	66808	5500
2	NS-178525 50 LB BAG OF BAYOXIDE PRODUCT GOODELL Task #: 173748*1 Required: 02/28/12 Requested By: Stephanie Goodell (SGOODELL)	1.00	EA	\$800.00	\$800.00	\$0.00	\$800.00	66808	5500

Order Net	\$3,300.00
Order Tax	\$0.00
Order Total	\$3,300.00

Approved By DIANE LANGOLF (DLANGOLF)

1/26/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT <http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 1/18/2012

Contract #

Print Date 10/8/2012

S li erShip ToBill To

MC MASTER-CARR SUPPLY COMPANY
P O BOX 7690
CHICAGO, IL 60680-7690

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Phone Number (330) 995-5500

F.O.B.

Terms

2% 10/n30

Fax Number

Shipper

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To EMAIL		1/18/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	920241 COUPLING - POLYPROPYLENE, 1 1/2", FEMALE NPT X PLUG, "A" ADAPTER, MCMASTER P/N 5535K33 Supplier #: 5535K33 Required: 01/18/12 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$2.69	\$2.69	\$0.00	\$2.69	63305	5500
2	NS-178223 BRASS HOOKS MCFARLANE Supplier #: 1760A6 Task #: 182217*7 Required: 01/24/12 Requested By: TIM MCFARLANE (TMCFARLA)	12.00	EA	\$2.33	\$27.96	\$0.00	\$27.96	63305	5100
3	NS-178224 ILLUMINATED MAGNIFIER MCFARLANE Supplier #: 1461T65 Task #: 182217*7 Required: 01/24/12 Requested By: TIM MCFARLANE (TMCFARLA)	1.00	EA	\$172.92	\$172.92	\$0.00	\$172.92	63305	5100

Order Net	\$203.57
Order Tax	\$0.00
Order Total	\$203.57

Approved By DIANE LANGOLF (DLANGOLF)

1/18/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

S li erShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To ron		10/18/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	816667 CLAMP - HOSE, 1/2", STAINLESS STEEL, P/N HSS 8 DIXON OR 6808 IDEAL Supplier #: HSS8 Required: 10/19/11 Requested By: L. AINSWORTH (LAINSWOR)	30.00	EA	\$0.68	\$20.40	\$0.00	\$20.40	63305	5100
2	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 10/26/11 Requested By: L. AINSWORTH (LAINSWOR)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

Order Net	\$479.40
Order Tax	\$0.00
Order Total	\$479.40

Approved By DIANE LANGOLF (DLANGOLF)

10/18/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

S li erShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RIB - QUOTE 981087		5/22/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 05/25/12 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$17.58	\$35.16	\$0.00	\$35.16	63305	5100
2	832440 FILTER - AIR, THROWAWAY, 16" X 20" X 1" Supplier #: 16 X 20 X 1 Required: 05/29/12 Requested By: KANDI COLBATH (KCOLBATH)	24.00	EA	\$1.47	\$35.28	\$0.00	\$35.28	63305	5100
3	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 05/30/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

Order Net	\$529.44
Order Tax	\$0.00
Order Total	\$529.44

Approved By DIANE LANGOLF (DLANGOLF)

5/22/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600
 Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order Yes		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Confirm To		RON 979542		5/15/2012					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	843121 LUBRICANT - LPS 2, LPS P/N 00216 Supplier #: 00216 Required: 05/19/12 Requested By: KANDI COLBATH (KCOLBATH)	6.00	CN	\$8.21	\$49.26	\$0.00	\$49.26	63305	5100
2	920584 LINK - MASTER, MORSE 140H CONNECTOR LINK C/L C/P P/F 2PB, 322449 FOR SHREDDER Supplier #: 140H Required: 05/19/12 Requested By: KANDI COLBATH (KCOLBATH)	6.00	EA	\$11.55	\$69.30	\$0.00	\$69.30	63305	5100
3	920336 LUBRICANT - OPEN CHAIN, 12 PER CASE, P/N S00202 Supplier #: 00202 Required: 05/24/12 Requested By: KANDI COLBATH (KCOLBATH)	24.00	EA	\$3.99	\$95.76	\$0.00	\$95.76	63305	5100
4	948593 LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147. Supplier #: 51147 Required: 05/21/12 Requested By: KANDI COLBATH (KCOLBATH)	5.00	EA	\$8.93	\$44.65	\$0.00	\$44.65	63305	5100
5	920516 "O" RING - 1/4 X 13 1/2 X 14, 10 PER. PKG., P/N 568-456 MOLDS Supplier #: 456 BUNA Required: 05/21/12 Requested By: KANDI COLBATH (KCOLBATH)	10.00	EA	\$1.28	\$12.80	\$0.00	\$12.80	63305	5100
6	659048 BLADE - HACK SAW, POWER, 21 X 1 3/4, 4 TOOTH, P/N 40126 Supplier #: 40126 Required: 05/27/12 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$26.57	\$53.14	\$0.00	\$53.14	63305	5100
7	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 05/23/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500



Amendment

PO Date 5/15/2012

Contract #

Print Date 10/8/2012

S li erShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes Confirming Order No Tax Exempt No Non-Exempt No MSDS Required No
Confirm To RON 979542 5/15/2012

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	832344 FILTER - AIR, THROWAWAY, 10 1/2" X 23 1/2" X 1/2" Required: 05/29/12 Requested By: KANDI COLBATH (KCOLBATH)	20.00	EA	\$5.07	\$101.40	\$0.00	\$101.40	63305	5100
9	920080 LINK - MASTER, CONNECTING FOR #35 ROLLER CHAIN, 3/8 PITCH, P/N 35 Supplier #: 35 Required: 05/17/12 Requested By: KANDI COLBATH (KCOLBATH)	4.00	EA	\$0.65	\$2.60	\$0.00	\$2.60	63305	5100

Order Net \$887.91
Order Tax \$0.00
Order Total \$887.91

Approved By DIANE LANGOLF (DLANGOLF)

5/15/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Status Completed
 Amendment
 PO Date 3/12/2012
 Contract #
 Print Date 10/8/2012

SupplierShip ToBill To

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON - QUOTE MI01-965953		3/12/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	803672 BELT - "V", 3L350 DODGE, 1350 GATES, 3L350 BROWNING Supplier #: 3L350 Required: 03/12/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$3.00	\$3.00	\$0.00	\$3.00	63305	5100
2	920011 FITTING - HOSE MENDER, 1/4", AEROQUIP P/N 4772-4B Supplier #: 4772-4B Required: 04/10/12 Requested By: KANDI COLBATH (KCOLBATH)	6.00	EA	\$3.62	\$21.72	\$0.00	\$21.72	63305	5203
3	816667 CLAMP - HOSE, 1/2", STAINLESS STEEL, P/N HSS 8 DIXON OR 6808 IDEAL Supplier #: HSS8 Required: 03/10/12 Requested By: KANDI COLBATH (KCOLBATH)	30.00	EA	\$0.79	\$23.70	\$0.00	\$23.70	63305	5100
4	865355 TEFLON - LIQUID, LOCTITE P/N 59231 Supplier #: 59231 Required: 03/13/12 Requested By: KANDI COLBATH (KCOLBATH)	3.00	EA	\$10.40	\$31.20	\$0.00	\$31.20	63305	5203
5	920732 SLEEVE - FOR #8 SURE-FLEX STD. COUPLINGS, P/N 8JES Supplier #: 8 JES Required: 03/15/12 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$27.12	\$54.24	\$0.00	\$54.24	63305	5100
6	659048 BLADE - HACK SAW, POWER, 21 X 1 3/4, 4 TOOTH, P/N 40126 Supplier #: 40126 Required: 03/21/12 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$26.57	\$53.14	\$0.00	\$53.14	63305	5100
7	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 03/16/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

Status Completed
 Amendment
 PO Date 3/12/2012
 Contract #
 Print Date 10/8/2012

S. lierShip ToBill To

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes Confirming Order No Tax Exempt No Non-Exempt No MSDS Required No
 Confirm To RON - QUOTE MI01-965953 3/12/2012

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	500513 KIT - FLUID ANALYSIS, VICKERS P/N 894276N FOR 5 EXT FOR OIL SAMPLE Supplier #: 894276 Required: 03/13/12 Requested By: KANDI COLBATH (KCOLBATH)	8.00	EA	\$58.37	\$466.96	\$0.00	\$466.96	63305	5100
9	950380 BRAKE - STEARNS BRAKE ASSEMBLY COMPLETE, P/N 1-087-061-00-122 SPECIFY 460V, FOR SCHUMAG CRANES Supplier #: 1-087-061-00-122 SPECIFY 460V Required: 03/22/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$1,792.95	\$1,792.95	\$0.00	\$1,792.95	63305	5205
10	950717 CLUTCH - MODEL 14", POWER-FLO SERIAL # 23530, 3 SCHUMAG. CLUTCH MUST BE DYNAMICALLY BALANCED ROUGH BORE Required: 04/21/12 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$4,468.30	\$4,468.30	\$0.00	\$4,468.30	63305	4108

Order Net \$7,374.21
 Order Tax \$0.00
 Order Total \$7,374.21

Approved By DIANE LANGOLF (DLANGOLF)

3/12/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

S. lierShip ToBill To
 MOTION INDUSTRIES
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON QUOTE 004813		9/17/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst	Cntr
1	816650 CLAMP - HOSE, 1/4", P/N 6203 IDEAL OR MH6 DIXON Supplier #: MH6 Required: 09/23/12 Requested By: KANDI COLBATH (KCOLBATH)	5.00	EA	\$0.45	\$2.25	\$0.00	\$2.25	63305	5100	
2	803672 BELT - "V", 3L350 DODGE, 1350 GATES, 3L350 BROWNING Supplier #: 3L350 Required: 09/19/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$3.00	\$3.00	\$0.00	\$3.00	63305	5100	
3	803983 BELT - "V", A34. Supplier #: A34 GATES Required: 09/18/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$3.58	\$3.58	\$0.00	\$3.58	63305	5100	
4	816649 CLAMP - HOSE, 5/16", P/N 6202 IDEAL OR MH4 DIXON Supplier #: MH4 Required: 09/18/12 Requested By: KANDI COLBATH (KCOLBATH)	10.00	EA	\$0.45	\$4.50	\$0.00	\$4.50	63305	5100	
5	943429 ADHESIVE - "O" RING, P/N 46551 LOCTITE 404 Supplier #: 46551 Required: 09/24/12 Requested By: KANDI COLBATH (KCOLBATH)	3.00	EA	\$13.58	\$40.74	\$0.00	\$40.74	63305	5203	
6	659056 BLADE - HACK SAW, POWER, 21 X 1 3/4, 6 TOOTH, P/N 61255 OR BS2106-8 Supplier #: 40127 Required: 10/13/12 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$26.57	\$53.14	\$0.00	\$53.14	63305	5100	
7	921544 CASTER - SWIVEL, 8" X 3" X 10 1/8" FOR #3 FURNACE ASH HOPPER Supplier #: 81CA08501S Required: 09/26/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$95.59	\$95.59	\$0.00	\$95.59	63305	4103	
8	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500	



Amendment

PO Date 9/17/2012

Contract #

Print Date 10/8/2012

S li erShip ToBill To

MOTION INDUSTRIES
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON QUOTE 004813		9/17/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
	Required: 09/26/12								
	Requested By: KANDI COLBATH (KCOLBATH)								
9	944132 VALVE - REXROTH, 4-WAY HYDRAULIC, FOR MARX STOMPER HOOD, P/N 4WE10J3X/CG24N9K4 Required: 09/19/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$583.34	\$583.34	\$0.00	\$583.34	63305	4103

Order Net	\$1,245.14
Order Tax	\$0.00
Order Total	\$1,245.14

Approved By DIANE LANGOLF (DLANGOLF)

9/17/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 9/4/2012

Contract #

Print Date 10/8/2012

S. lierShip ToBill To

MOTION INDUSTRIES
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To 002137		9/4/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	816650 CLAMP - HOSE, 1/4", P/N 6203 IDEAL OR MH6 DIXON Supplier #: MH6 Required: 09/11/12 Requested By: KANDI COLBATH (KCOLBATH)	5.00	EA	\$0.45	\$2.25	\$0.00	\$2.25	63305	5100
2	921544 CASTER - SWIVEL, 8" X 3" X 10 1/8" FOR #3 FURNACE ASH HOPPER Supplier #: 81CA08501S Required: 09/14/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$95.59	\$95.59	\$0.00	\$95.59	63305	4103
3	921545 CASTER - RIGID, 8" X 3" X 10 1/8", FOR #3 FURNACE ASH HOPPER Supplier #: 81-CA-08501-R Required: 09/15/12 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$55.28	\$110.56	\$0.00	\$110.56	63305	4103
4	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 09/11/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500
5	500513 KIT - FLUID ANALYSIS, VICKERS P/N 894277-P FOR 5 EXT FOR OIL SAMPLE @ \$72.50/EACH Supplier #: 894276 Required: 09/05/12 Requested By: KANDI COLBATH (KCOLBATH)	8.00	EA	\$72.05	\$576.40	\$0.00	\$576.40	63305	5100

Order Net	\$1,243.80
Order Tax	\$0.00
Order Total	\$1,243.80

Approved By DIANE LANGOLF (DLANGOLF)

9/4/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
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Amendment

PO Date 7/2/2012

Contract #

Print Date 10/8/2012

Supplier

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

F.O.B. DEST, FRT ALLOWED

Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Terms 2% 15, NET 45

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To ron quote 989344		7/2/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 07/03/12 Requested By: DIANE LANGOLF (DLANGOLF)	2.00	EA	\$17.58	\$35.16	\$0.00	\$35.16	63305	5100
2	948593 LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147. Supplier #: 51147 Required: 07/06/12 Requested By: KANDI COLBATH (KCOLBATH)	5.00	EA	\$8.93	\$44.65	\$0.00	\$44.65	63305	5100
	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 07/08/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

Order Net	\$538.81
Order Tax	\$0.00
Order Total	\$538.81

Approved By DIANE LANGOLF (DLANGOLF)

7/2/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

F.O.B. DEST, FRT ALLOWED

Shipper

Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Terms 2% 15, NET 45

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON QUOTE MI01-986964		6/20/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	920009 FITTING - HOSE MENDER, 3/8", AEROQUIP P/N 4772-6B Supplier #: 4772-6B Required: 07/06/12 Requested By: KANDI COLBATH (KCOLBATH)	10.00	EA	\$3.21	\$32.10	\$0.00	\$32.10	63305	5100
2	920336 LUBRICANT - OPEN CHAIN, 12 PER CASE, P/N S00202 Supplier #: 00202 Required: 06/29/12 Requested By: KANDI COLBATH (KCOLBATH)	24.00	EA	\$3.99	\$95.76	\$0.00	\$95.76	63305	5100
3	920093 LINK - MASTER, CONNECTING FOR #50 CHAIN, P/N 50 L/B OR REX OR MORSE Required: 06/27/12 Requested By: KANDI COLBATH (KCOLBATH)	6.00	EA	\$1.04	\$6.24	\$0.00	\$6.24	63305	5100
4	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 06/28/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

Order Net	\$593.10
Order Tax	\$0.00
Order Total	\$593.10

Approved By DIANE LANGOLF (DLANGOLF)

6/20/2012

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 6/13/2012

Contract #

Print Date 10/8/2012

SupplierShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON QUOTE 985476		6/13/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	832408 FILTER - AIR, THROWAWAY, 10" X 10" X 1" FIBERGLASS Supplier #: 10 X10 X1 Required: 06/21/12 Requested By: KANDI COLBATH (KCOLBATH)	12.00	EA	\$1.58	\$18.96	\$0.00	\$18.96	63305	5100
2	921176 BEARING - P/N 205 KD FAFNIR, 7505 NEW DEPARTURE, 6205Z SKF OR 205SF MRC Supplier #: 205 KD Required: 06/14/12 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$10.83	\$21.66	\$0.00	\$21.66	63305	5100
	948593 LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147. Supplier #: 51147 Required: 06/19/12 Requested By: KANDI COLBATH (KCOLBATH)	5.00	EA	\$8.93	\$44.65	\$0.00	\$44.65	63305	5100
4	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 06/21/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

Order Net	\$544.27
Order Tax	\$0.00
Order Total	\$544.27

Approved By DIANE LANGOLF (DLANGOLF)

6/13/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

S li erShip ToBill To
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Phone Number (248) 583-8600

F.O.B. DEST, FRT ALLOWED

Terms 2% 15, NET 45

Fax Number (248) 583-8635

Shipper

Original Order Yes		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Confirm To		RON QUOTE 985149		6/12/2012					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 06/12/12 Requested By: KANDI COLBATH (KCOLBATH)	2.00	EA	\$17.58	\$35.16	\$0.00	\$35.16	63305	5100
2	600401 SEALANT - SILICONE -LOCTITE, P/N 82046, 11 OUNCE ULTRA COPPER HIGH TEMP. RTV SILICONE GASKET SEALANT Supplier #: 82046 Required: 06/15/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$13.89	\$13.89	\$0.00	\$13.89	63305	5100
	837816 HOSE - WATER, 3/8", 2 BRAID, 300 PSI, GOODYEAR P/N 3/8BKWINGF300RL Required: 06/18/12 Requested By: KANDI COLBATH (KCOLBATH)	150.00	FT	\$1.96	\$294.00	\$0.00	\$294.00	63305	5100
4	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 06/17/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500
5	803984 BELT - "V", A35 NO SUBS. REPLACES 4L370. Supplier #: A35 Required: 06/16/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$3.64	\$3.64	\$0.00	\$3.64	63305	5100
6	920921 BELT - TIMING, P/N 1800-XXH-500 WOODS FOR 16" LOMA SAW, BILLET SAW Supplier #: 1800-XXH-500 Required: 06/21/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$636.71	\$636.71	\$0.00	\$636.71	63305	4105
7	946068 COUPLING - FOR ENCODER ON GANG-SAW, LOVEJOY P/N EC112-3/8 Supplier #: EC112-3/8 Required: 06/19/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$47.73	\$47.73	\$0.00	\$47.73	63305	4111



Status Completed
 Amendment
 PO Date 6/12/2012
 Contract #
 Print Date 10/8/2012

Supplier

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

F.O.B. DEST, FRT ALLOWED

Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Terms 2% 15, NET 45

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON QUOTE 985149		6/12/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	843121 LUBRICANT - LPS 2, LPS P/N 00216 Supplier #: 00216 Required: 06/20/12 Requested By: KANDI COLBATH (KCOLBATH)	6.00	CN	\$8.21	\$49.26	\$0.00	\$49.26	63305	5100
9	816740 CLAMP - HOSE, 3/4", STAINLESS STEEL, DIXON P/N HSS12 Supplier #: HSS12 Required: 06/15/12 Requested By: KANDI COLBATH (KCOLBATH)	60.00	EA	\$0.79	\$47.40	\$0.00	\$47.40	63305	5100

Order Net	\$1,586.79
Order Tax	\$0.00
Order Total	\$1,586.79

Approved By DIANE LANGOLF (DLANGOLF)

6/12/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

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Shipper

Bill To

MUELLER BRASS CO.
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 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Terms 2% 15, NET 45

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON 983495		6/4/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 06/10/12 Requested By: KANDI COLBATH (KCOLBATH)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500
2	946068 COUPLING - FOR ENCODER ON GANG-SAW, LOVEJOY P/N EC112-3/8 Supplier #: EC112-3/8 Required: 06/10/12 Requested By: KANDI COLBATH (KCOLBATH)	1.00	EA	\$47.73	\$47.73	\$0.00	\$47.73	63305	4111

Order Net	\$506.73
Order Tax	\$0.00
Order Total	\$506.73

Approved By DIANE LANGOLF (DLANGOLF)

6/4/2012

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<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 10/21/2011

Contract #

Print Date 10/8/2012

S li erShip ToBill To

FERGUSON ENTERPRISES INC.
2969 LAPEER RD.
PORT HURON, MI 48060

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms

Phone Number (810) 987-3111
Fax Number (810) 987-5758

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-175676 TEE - 3" SCH80 PVC SOCKET WELD Task #: 182217*5 Required: 10/27/11 Requested By: HOWARD FERGUSON (HFERGUSO)	1.00	EA	\$11.17	\$11.17	\$0.00	\$11.17	63305	5500
2	NS-175677 FLANGE - Task #: 182217*5 Required: 10/27/11 Requested By: HOWARD FERGUSON (HFERGUSO)	2.00	EA	\$11.87	\$23.74	\$0.00	\$23.74	63305	5500

Order Net	\$34.91
Order Tax	\$0.00
Order Total	\$34.91

Approved By KIM BOWEN (KBOWEN)

10/21/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Status Completed
 Amendment
 PO Date 5/25/2012
 Contract #
 Print Date 10/8/2012

S li er

FERGUSON ENTERPRISES INC.
 2969 LAPEER RD.
 PORT HURON, MI 48060

Phone Number (810) 987-3111
 Fax Number (810) 987-5758

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To KATHY CORNWELL		5/25/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-182505 SHELCO SPRING AND SEAL ASSY Task #: 188696*4 Required: 05/30/12 Requested By: DOUG WESTBROOK (DWESTBRO)	6.00	EA	\$18.70	\$112.20	\$0.00	\$112.20	63305	5500

Order Net	\$112.20
Order Tax	\$0.00
Order Total	\$112.20

Approved By DIANE LANGOLF (DLANGOLF)

5/25/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Status Matched
 Amendment
 PO Date 3/12/2012
 Contract #
 Print Date 10/8/2012

<u>S</u> <u>li</u> <u>er</u>	<u>Ship To</u>	<u>Bill To</u>
HAMMAR CONTRACTING, L.L.C 1177 WADHAMS RD. SMITH CREEK, MI 48074	MUELLER BRASS CO. Receiving 2199 LAPEER AVE. PORT HURON, MI 48060 USA F.O.B.	MUELLER BRASS CO. Accounts Payable 2199 LAPEER AVE. PORT HURON, MI 48060 USA
Phone Number (810) 367-3037	Shipper	Terms
Fax Number (810) 367-8414		

Original Order No Confirm To	Confirming Order Yes	Tax Exempt No 3/12/2012	Non-Exempt No	MSDS Required No
---------------------------------	----------------------	----------------------------	---------------	------------------

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-180128 COST OF LABOR, MATERIAL, AND EQUIPMENT TO ROLL A 20" PIPE, CLEAN AND USE EXISTING FLANGE, DRILL AND TAP HOLES, AND INSTALL ON THE #4 TUNDISH LID RADER Task #: 188697*1 Required: 03/16/12 Requested By: ERIC RADER (ERADER)	1.00	JO	\$1,616.00	\$1,616.00	\$0.00	\$1,616.00	63410	4101

Order Net	\$1,616.00
Order Tax	\$0.00
Order Total	\$1,616.00

Approved By DIANE LANGOLF (DLANGOLF)

3/12/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 3/12/2012

Contract #

Print Date 10/8/2012

S li er

H H BARNUM CO.
7915 LOCHLIN DRIVE
BRIGHTON, MI 48116

Phone Number (248) 486-7300

Fax Number

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

F.O.B.

Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To SCOTT - QUOTE 606557		3/12/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-179867 SIGNET 1" PVC CORE, PART 346 EPDM (NUMBER 161.483.933) WESTBROOK Task #: 188696*1 Required: 03/08/12 Requested By: DOUG WESTBROOK (DWESTBRO)	3.00	EA	\$46.90	\$140.70	\$0.00	\$140.70	63305	5500

Order Net	\$140.70
Order Tax	\$0.00
Order Total	\$140.70

Approved By DIANE LANGOLF (DLANGOLF)

3/12/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier

H H BARNUM CO.
7915 LOCHLIN DRIVE
BRIGHTON, MI 48116

Phone Number (248) 486-7300

Fax Number

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

F.O.B.

Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Terms

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To ALEX KOZA		2/22/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-179588 GF PART NUMBER 161.346.314 VALVE (FOR PNEUMATIC CART VALVE GF # 199.223.135) PVC WESTBROOK Task #: 188696*1 Required: 02/28/12 Requested By: DOUG WESTBROOK (DWESTBRO)	2.00	EA	\$34.78	\$69.56	\$0.00	\$69.56	63305	5500

Order Net	\$69.56
Order Tax	\$0.00
Order Total	\$69.56

Approved By DIANE LANGOLF (DLANGOLF)

2/22/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT <http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 8/22/2012

Contract #

Print Date 10/8/2012

Seller

MORTIMER & SON LUMBER CO., INC.
2307 LAPEER AVE
PORT HURON, MI 48060

Phone Number (810) 987-3020

Fax Number

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

F.O.B.

Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To		8/22/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-184789 SOFTENER PELLETS 50# WESTBROOK Task #: 188696*5 Required: 08/31/12 Requested By: DOUG WESTBROOK (DWESTBRO)	49.00	EA	\$6.45	\$316.05	\$0.00	\$316.05	63305	5500
2	NS-184790 DELIVERY CHARGE Task #: 188696*5 Required: 08/31/12 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$15.00	\$15.00	\$0.00	\$15.00	63305	5500

Order Net	\$331.05
Order Tax	\$0.00
Order Total	\$331.05

Approved By DIANE LANGOLF (DLANGOLF)

8/22/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Status Completed
 Amendment
 PO Date 5/29/2012
 Contract #
 Print Date 10/8/2012

Seller

CHEM-AQUA
 1331 WEST LAKE DRIVE
 NOVI, MI 48377

Phone Number (800) 631-0990
 Fax Number (248) 960-1409

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To		5/29/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-182574 VECTOR CONTINUOUS FLOW BROMINE FEEDER. THIS IS A 50LB FEEDER WITH A 1 INCH INLET AND OUTLET. PART NUMBER 10071276 BROMINE FEEDER STRUBLE Task #: 127094*2 Required: 05/27/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,075.00	\$1,075.00	\$0.00	\$1,075.00	66810	5500
2	NS-182575 FLOWMETER MAINIFOLD FOR CONTINUOUS FEED 1-10GPM STRUBLE Task #: 127094*2 Required: 05/27/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$124.00	\$124.00	\$0.00	\$124.00	66810	5500

Order Net	\$1,199.00
Order Tax	\$0.00
Order Total	\$1,199.00

Approved By DIANE LANGOLF (DLANGOLF)

5/29/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

S li erShip ToBill To

CHEM-AQUA
1331 WEST LAKE DRIVE
NOVI, MI 48377

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms

Phone Number (800) 631-0990

Fax Number (248) 960-1409

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON JOHNSON		7/3/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-182574 VECTOR CONTINUOUS FLOW BROMINE FEEDER. THIS IS A 50LB FEEDER WITH A 1 INCH INLET AND OUTLET. PART NUMBER 10071276 BROMINE FEEDER STRUBLE Task #: 127094*2 Required: 05/27/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,075.00	\$1,075.00	\$0.00	\$1,075.00	66810	5500
2	NS-182575 FLOWMETER MAINIFOLD FOR CONTINUOUS FEED 1-10GPM STRUBLE Task #: 127094*2 Required: 05/27/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$124.00	\$124.00	\$0.00	\$124.00	66810	5500

Order Net	\$1,199.00
Order Tax	\$0.00
Order Total	\$1,199.00

Approved By DIANE LANGOLF (DLANGOLF)

7/3/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier

FERGUSON ENTERPRISES INC.
2969 LAPEER RD.
PORT HURON, MI 48060

Phone Number (810) 987-3111

Fax Number (810) 987-5758

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To		3/6/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-180000 P80SFBMK 3 X 2 PVC SCH80 SXF BUSH WESTBROOK Task #: 188696*1 Required: 03/12/12 Requested By: DIANE LANGOLF (DLANGOLF)	1.00	EA	\$16.31	\$16.31	\$0.00	\$16.31	63305	5500

Order Net	\$16.31
Order Tax	\$0.00
Order Total	\$16.31

Approved By DIANE LANGOLF (DLANGOLF)

3/6/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

S ierShip ToBill To

D G R CONTRACTING
390 N. DECKER RD.
MARLETTE, MI 48453

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2%/10, n30

Phone Number (989) 635-7354

Fax Number (989) 635-6664

Original Order No	Confirming Order Yes	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To SCAN PO TO DGR		2/15/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-179330 MOVE, ASSEMBLE AND INSTALL OFFICE EQUIPMENT IN ENGINEERING OFFICES STRUBLE Task #: 188696*1 Required: 02/21/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$500.00	\$500.00	\$0.00	\$500.00	63305	5201
2	NS-179329 Change 36 filters in Wastewater at R.O UNIT Task #: 188696*1 Required: 02/21/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$728.00	\$728.00	\$0.00	\$728.00	63305	5500
	NS-179328 CHECK LINE UP OF TUNDISH ON #4 CASTER Task #: 188696*1 Required: 02/21/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$988.00	\$988.00	\$0.00	\$988.00	63305	4101
4	NS-179327 Install fiber-optic comm. cable from Forging warehouse to Rod Mill along phone poles. Task #: 127097*8 Required: 02/21/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$2,900.00	\$2,900.00	\$0.00	\$2,900.00	16200	

Order Net	\$5,116.00
Order Tax	\$0.00
Order Total	\$5,116.00

Approved By DIANE LANGOLF (DLANGOLF)

2/15/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier

MC MASTER-CARR SUPPLY COMPANY
P O BOX 7690
CHICAGO, IL 60680-7690

Phone Number (330) 995-5500

Fax Number

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 10/n30

Original Order No Confirm To	Confirming Order Yes	Tax Exempt No 2/13/2012	Non-Exempt No	MSDS Required No
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Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-179247 1" PVC UNION NPT TONPT BRAND IS +GF+ (FOR RO UNIT) STRUBLE Supplier #: 4596K64 Task #: 188696*1 Required: 02/18/12 Requested By: DAVE STRUBLE (DSTRUBLE)	10.00	EA	\$9.33	\$93.30	\$0.00	\$93.30	63305	5500

Order Net	\$93.30
Order Tax	\$0.00
Order Total	\$93.30

Approved By DIANE LANGOLF (DLANGOLF)

2/13/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

S. lierShip ToBill To

FERGUSON ENTERPRISES INC.
2969 LAPEER RD.
PORT HURON, MI 48060

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms

Phone Number (810) 987-3111
Fax Number (810) 987-5758

Original Order No	Confirming Order Yes	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To		12/15/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-177222 3" PVC BUTTERFLY VALVE STRUBLE Supplier #: HBY110300EL Task #: 182217*6 Required: 12/21/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$207.68	\$207.68	\$0.00	\$207.68	63305	5500

Order Net	\$207.68
Order Tax	\$0.00
Order Total	\$207.68

Approved By DIANE LANGOLF (DLANGOLF)

12/15/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 1/27/2012

Contract #

Print Date 10/8/2012

SupplierShip ToBill To

TOTAL FILTRATION SERVICES
1271 RANKIN
TROY, MI 48083

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms

Phone Number (248) 377-4004

Fax Number (248) 475-8269

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To BILL		1/27/2012		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-162154 REVERSE OSMOSIS MEMBRANE ELEMENT 8" X 40" - (HYDRANAUTICS) STRUBLE Supplier #: ESPA2-LD Task #: 173705*5 Required: 02/10/12 Requested By: DAVE STRUBLE (DSTRUBLE)	36.00	EA	\$560.26	\$20,169.36	\$0.00	\$20,169.36	63305	5500

Order Net	\$20,169.36
Order Tax	\$0.00
Order Total	\$20,169.36

Approved By DIANE LANGOLF (DLANGOLF)

1/27/2012

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

A DESCRIPTION OF THE ENVIRONMENTAL AND PUBLIC HEALTH BENEFITS

Implementation of the supplemental environmental project has enabled Mueller Brass Company to reduce its environmental impact in three manners. Installation of the reverse osmosis system has allowed for water to be reused at the facility that would otherwise have been sent to the POTW for treatment. This prevents the metals included in that water from being sent to the POTW. The reuse of the RO treated water enables Mueller Brass Co to purchase less water from the city. Both of these criteria reduce the burden placed upon the POTW to treat and supply Mueller Brass Co with those quantities of water.

For the time frame of September 28th 2011 to September 28th 2012 the best estimates as calculated by Mueller Brass Co calculates the RO system to have processed 7,606,000 gallons of water. This equates to 55.9 pounds of metal that would otherwise have been sent to the POTW being captured in the Mueller system. This calculation is based upon recent waste water discharge analysis.

Also beneficial to the environment is the recycling of the filter cake from the waste water treatment system. The filter cake is a composition of the flocculent used in the waste water treatment process and the metals that precipitate from the water. This cake that was previously sent to landfill is now being recycled for its zinc content.

From September 28th 2011 to September 28th 2012 Mueller Brass Co. shipped 97,053 pounds of filter cake to a zinc reclamation facility. Based upon recent analytical data this equates to 48,052 pounds of metals being recycled rather than landfilled.

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

X S. Sigloch

Steffen Sigloch

V.P. of Corporate Engineering and Manufacturing

November 22, 2011

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Annual SEP Summary Report – 2nd Year

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company, U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file an annual SEP summary report within sixty days after the 2nd, 3rd, 4th, and 5th anniversaries of beginning operation of the reverse osmosis system. Construction was considered complete on 9/28/2009. This being the 2nd annual report submitted summarizes the operation period between 9/28/2010 and 9/28/2011.

Pursuant to paragraph 85 item D the following is a listing of the requested information for the reporting period:

- i. A detailed description of the SEP as implemented
- ii. An audit of SEP expenditures, including but not limited to, itemized costs for the SEP, documented by copies of purchase orders and receipts or canceled checks
- iii. Certification that the SEP has been implemented pursuant to the provisions of this CAFO
- iv. A description of the environmental and public health benefits resulting from implementation of the SEP and a best estimate quantification of the benefits and pollution reductions obtained.

Enclosed you will find the response to each piece of information requested.

Sincerely,



Kevin Pedler
EHS Manager
Mueller Brass Company
810-434-2713

A DETAILED DESCRIPTION OF THE SUPPLEMENTAL ENVIRONMENTAL PROJECT AS IMPLEMENTED

A reverse osmosis system (ROS) was added to the existing metal detoxification wastewater treatment system at Mueller Brass Company's Port Huron, MI facility as a result of a Supplemental Environmental Project negotiated in conjunction with a Consent Agreement and final Order (CAFO) from Region V of the United States Environmental Protection Agency Docket No. RCRA-05-2008-0016.

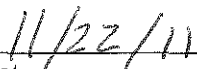
The existing metal detoxification wastewater treatment system receives rinse waters from the facility which are cycled through the following processes: homogenization, neutralization/ precipitation, flocculation, clarification and sand filtration. The ROS was added to reduce the amount of metals left in the discharge from the metal detoxification system sand filter. As operating today, the ROS consists of the following sequence: Ph adjustment, homogenization, media filtration, water softening, cartridge filtration and reverse osmosis.

The system is engineered to use either discharge water from the metal detoxification system sand filter or capture storm water runoff. Storm water runoff is fed directly to the ROS or is sent to plant processes for cooling and then becomes incorporated into the flow that is processed through the metal detoxification system.

The primary feed for the ROS is the discharge water from the metal detoxification system sand filter. The system is designed to remove metal that remains in solution (was not precipitated) from the metal detoxification system. The treated water from the ROS is either discharged to the City of Port Huron Reclamation Treatment Plant or recycled to Mueller Brass plant processes for reuse. The reject flow from the ROS is sent to the front of the metal detoxification system for retreatment.

This statement and the above description are to serve as certification that the SEP has been implemented pursuant to the provisions of the Consent Agreement and Final Order Docket No. RCRA-05-2008-0016.


Signature


Date

**AN AUDIT OF SEP EXPENDITURES INCLUDING AN
ITEMIZED LIST AND INDIVIDUAL PURCHASE
ORDERS**

PR #	Date	Spare Part	Part Description	Required	Price	Line Total	Line Status
Supplier: 10985 - CHEM-AQUA							
145611	3/17/2011	DOUG WESTBROOK	NS-169291	RO CHEMICAL MB224	3/28/2011	403.20	403.20 C
146542	4/12/2011	ERIC RADER (ERAD)	NS-170122	MB-38 BIOCID, 500# DR	4/19/2011	0.65	1,235.00 C
148616	6/14/2011	DOUG WESTBROOK	NS-171942	BLANKET ORDER TO COVER THE COST OF RO CHEMICALS. COST NOT TO EXCEED \$6000.00. COVERS THE PERIOD FROM JUNE 20, 2011 TO JULY 31, 2012	6/21/2011	0.01	0.01 O
149234	7/9/2011	DOUG WESTBROOK	NS-172430	SODIUM BISULFITE (#10187992). PLEASE USE BLANKET PURCHASE ORDER (R40238) FOR WWTP RO CHEMICALS	7/16/2011	399.75	399.75 C
			NS-172431	ANTI-SCALANT (#10188965). PLEASE USE BLANKET PURCHASE ORDER (R40238) FOR WWTP RO	7/16/2011	2,619.75	2,619.75 C
Supplier 10985 Total						4,657.71	
Supplier: 70014409 - MAR COR PURIFICATION							
144805	2/22/2011	DOUG WESTBROOK	NS-168580	4080028 BEARING PLATE FOR RO UNIT	3/1/2011	148.84	297.68 C
146061	3/30/2011	DAVE STRUBLE (DS)	NS-169761	REVERSE OSMOSIS MEMBRANE STEM CONNECTION	4/6/2011	60.80	60.80 C
Supplier 70014409 Total						358.48	
Supplier: 70014627 - INTERSTATE CHEMICAL CO., INC.							
145612	3/17/2011	DOUG WESTBROOK	NS-169294	TOTE OF SODIUM HYPOCHLORITE SOLUTION 12 - 15%	3/28/2011	437.25	437.25 C
Supplier 70014627 Total						437.25	
Supplier: 70015200 - ROCHESTER MIDLAND CORPORATION							
45314	3/9/2011	DAVE STRUBLE (DS)	NS-169076	PURCHASE OF WATER SOFTENER FOR TREATMENT OF FEEDWATER IN THE RO SYSTEM- BILLED IN \$1500 DOLLAR MONTHLY INSTALLMENTS	3/16/2011	0.00	0.00 O
			NS-169077	APRIL PAYMENT	4/25/2011	1,500.00	1,500.00 M
			NS-169078	MAY PAYMENT	5/25/2011	1,500.00	1,500.00 M
			NS-169079	JUNE PAYMENT	6/25/2011	1,500.00	1,500.00 M
			NS-169080	JULY PAYMENT	7/25/2011	1,500.00	1,500.00 M
			NS-169081	AUGUST PAYMENT	8/25/2011	1,500.00	1,500.00 M
			NS-169082	SEPTEMBER PAYMENT	9/25/2011	1,500.00	1,500.00 O
			NS-169083	OCTOBER PAYMENT	10/25/2011	1,500.00	1,500.00 O
			NS-169084	NOVEMBER PAYMENT	11/25/2011	1,500.00	1,500.00 O
			NS-169085	DECEMBER PAYMENT	12/25/2011	1,500.00	1,500.00 O
			NS-169086	JANUARY PAYMENT	1/25/2012	1,500.00	1,500.00 O
			NS-169087	FEBRUARY PAYMENT	2/25/2012	1,500.00	1,500.00 O
			NS-169088	MARCH PAYMENT	3/25/2012	1,500.00	1,500.00 O
145366	3/11/2011	DOUG WESTBROOK	NS-169138	BIO DISPERSANT FOR WWTP SAND FILTER	3/21/2011	135.20	270.40 C
Supplier 70015200 Total						18,270.40	
Supplier: B1001 - BLUE WATER MAINTENANCE, INC.							
148059	5/25/2011	DAVE STRUBLE (DS)	NS-171490	INSTALLATION OF WATER SOFTENER IN WWTP - MATERIAL COST	6/1/2011	1,136.81	1,136.81 M
			NS-171491	LABOR ON 5/18/11 AND 05/20/11	6/1/2011	2,731.58	2,731.58 M
Supplier B1001 Total						3,868.39	
Supplier: BCM110 - K L MC COY AND ASSOCIATES INC.							
142317	11/18/2010	DAVE STRUBLE (DS)	NS-166584	(1) TACO F1-2507, 3" X 2-1/2" BASE MOUNTED SUCTION PUMP, RATED FOR 400 GPM @80PSI (185') 40 HP, 3500 RPM 460 VOLT 3 PHASE MOTOR	1/5/2011	2,628.00	2,628.00 C

PR #	Date	Spare Part	Part Description	Required	Price	Line Total	Line Status
Supplier: BCM110 - K L MC COY AND ASSOCIATES INC. Continued							
Supplier BCM110 Total						2,628.00	
Supplier: D1000 - D G R CONTRACTING							
142350	11/19/2010	DAVE STRUBLE (DE	NS-166626	FABRICATE DRIP PAN FOR 12" ROUND CHIMNEY AT SLUDGE DRYER SCRUBBER IN WWTP	11/26/2010	240.00	240.00 M
148691	6/17/2011	DOUG WESTBROOK	NS-172043	COST OF LABOR TO INSTALL NEW SAND IN SAND FILTER	7/11/2011	1,344.00	1,344.00 M
Supplier D1000 Total						1,584.00	
Supplier: H1000 - HAMMAR CONTRACTING, L.L.C							
148592	6/14/2011	DAVE STRUBLE (DE	NS-171924	COST OF LABOR AND EQUIPMENT TO INSTALL NEW WATER SOFTENER TANK ON A PLATFORM IN WWTP	6/21/2011	925.00	925.00 M
			NS-171925	COST OF LABOR, EQUIPMENT AND MATERIALS TO BUILD AND INSTALL A PLATFORM TO HOLD SOFTENER TANK.	6/21/2011	1,985.00	1,985.00 M
Supplier H1000 Total						2,910.00	
Supplier: M9434 - MOTION INDUSTRIES, INC							
141030	10/5/2010	STOCKROOM	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	10/13/2010	4.88	219.60 C
141481	10/20/2010	STOCKROOM	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	10/28/2010	4.88	219.60 C
142355	11/19/2010	STOCKROOM	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	11/27/2010	4.88	219.60 C
142713	12/3/2010	STOCKROOM	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	12/11/2010	4.88	219.60 C
142947	12/13/2010	STOCKROOM	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	12/21/2010	4.88	439.20 C
143971	1/24/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	2/1/2011	4.88	439.20 C
144501	2/11/2011	DAVE STRUBLE (DE	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	2/19/2011	4.88	439.20 C
144618	2/15/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	2/23/2011	4.88	439.20 C
144960	2/28/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	3/8/2011	4.88	439.20 C
145234	3/7/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	3/16/2011	4.88	439.20 C
148261	6/3/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	6/12/2011	5.10	459.00 C
148770	6/20/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	6/29/2011	5.10	459.00 C
149587	7/20/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	7/29/2011	5.10	459.00 C
150507	8/22/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	8/31/2011	5.10	459.00 C
151566	9/23/2011	L. AINSWORTH (LAI	924199	FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30	10/2/2011	5.10	459.00 C
Supplier M9434 Total						5,808.60	
Supplier: P8531 - PROFESSIONAL PUMP INC.							
144733	2/18/2011	DAVE STRUBLE (DE					

PR #	Date	Spare Part	Part Description	Required	Price	Line Total	Line Status
Supplier: P8531 - PROFESSIONAL PUMP INC. Continued							
		NS-168514	Sodium Hypochlorite Metering Pump -24GPD @ 100PSI MAX	2/25/2011	673.00	673.00	C
148382	6/7/2011	DAVE STRUBLE (DE	NS-171754	MARCH SINGLE PHASE PUMP	6/14/2011	497.00	C
Supplier P8531 Total						1,170.00	
Grand Total						41,692.83	

Cost Center = "5500" and PO # = "R39259" "R38174" "R40242" "R40211" "R39530" "R41359" "R40967" "R40549" "R40338" "R40238" "R40117" "R40113" "R39379" "R39157" "R39138" "R39047" "R38925" "R38900" "R38873" "R38657" "R38347" "R38224" "R38208" "R37920" ...

Supplier

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600
 Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, PP & ADD
 Shipper UPS

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order No		Confirming Order Yes		Tax Exempt Yes		Non-Exempt No		MSDS Required No	
Confirm To WEB				10/1/2010					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 10/04/10 Requested By: STOCKROOM	2.00	EA	\$15.65	\$31.30	\$0.00	\$31.30	63305	5100
2	804064 BELT - "V", B53. Supplier #: B53 Required: 10/04/10 Requested By: STOCKROOM	1.00	EA	\$5.97	\$5.97	\$0.00	\$5.97	63305	5100
3	835915 SEALANT - CLEAR RTV SILICONE, LOCTITE P/N 30560 RTV BLUE 85 GR Supplier #: 30560 Required: 10/04/10 Requested By: STOCKROOM	12.00	EA	\$3.14	\$37.68	\$0.00	\$37.68	63305	5100
4	924440 SWIVEL - ANGLE, 1/4", 90 DEG., P/N 501-255-000 TRABON Supplier #: 501-255-000 Required: 10/09/10 Requested By: STOCKROOM	2.00	EA	\$22.07	\$44.14	\$0.00	\$44.14	63305	5100
5	500530 BEARING - ROLLER, P/N MRC106KSZZG OR SKF-6006 RSNRJ, 5 EXTRUDER EXIT ROLLS Supplier #: MRC106KSZZG Required: 10/09/10 Requested By: STOCKROOM	4.00	EA	\$28.09	\$112.36	\$0.00	\$112.36	63305	4113
6	NS-165608 SPARE SPROCKET FOR BLUE CONVEYOR 500AG435 BOB KINNEY Task #: 173705*7 Required: 10/12/10 Requested By: BOB KINNEY (BKINNEY)	1.00	EA	\$39.73	\$39.73	\$0.00	\$39.73	63305	5101
7	835916 SEALANT - SILATECH 100% SILICONE SEALANT, CLEAR -LOCTITE P/N 32389 CAULKING GUN SIZE. Supplier #: 32389 Required: 10/15/10 Requested By: STOCKROOM	2.00	EA	\$3.18	\$6.36	\$0.00	\$6.36	63305	5100

Supplier

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 USA
 Terms 2% 15, NET 45

Original Order No	Confirming Order Yes	Tax Exempt Yes	Non-Exempt No	MSDS Required No
Confirm To WEB		10/1/2010		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 10/13/10 Requested By: STOCKROOM	45.00	EA	\$4.88	\$219.60	\$0.00	\$219.60	63305	5500

Order Net	\$497.14
Order Tax	\$0.00
Order Total	\$497.14

Approved By VIRGINIA ZOTTER (VZOTTER)

10/1/2010

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
www.muellerindustries.com UNDER "PRODUCTS AND SERVICES"



Status Received
 Amendment
 PO Date 10/21/2010
 Contract #
 Print Date 11/14/2011

Supplier

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600
 Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

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Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Terms 2% 15, NET 45

Original Order No	Confirming Order Yes	Tax Exempt Yes	Non-Exempt No	MSDS Required No
Confirm To WEB		10/21/2010		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	920523 "O" RING - 1/16 X 13/16 X 15/16, 10 PER PKG, P/N 019 BUNA Supplier #: 568-019 Required: 10/27/10 Requested By: STOCKROOM	1.00	EA	\$0.34	\$0.34	\$0.00	\$0.34	63305	5100
2	843121 LUBRICANT - LPS 2, LPS P/N 00216 Supplier #: 00216 Required: 10/29/10 Requested By: STOCKROOM	8.00	CN	\$6.57	\$52.56	\$0.00	\$52.56	63305	5100
3	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 10/25/10 Requested By: STOCKROOM	2.00	EA	\$15.65	\$31.30	\$0.00	\$31.30	63305	5100
4	800421 DRIVE - ADJUSTABLE FREQUENCY, MOTORTRONICS P/N CSD405-N RODMILL Supplier #: CSD405N Required: 11/03/10 Requested By: STOCKROOM	1.00	EA	\$581.81	\$581.81	\$0.00	\$581.81	63305	4111
5	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 10/28/10 Requested By: STOCKROOM	45.00	EA	\$4.88	\$219.60	\$0.00	\$219.60	63305	5500
6	402000 SWITCH - PROXIMITY SWITCH SIEMENS P/N 3RG4031-6AD00 BERO DC PNP 10-65 VOLT 500MA MAX FOR 5 EXT Supplier #: 3RG4031-6AD00 Required: 10/27/10 Requested By: STOCKROOM	6.00	EA	\$78.41	\$470.46	\$0.00	\$470.46	63305	4113
7	943429 ADHESIVE - "O" RING, P/N 46551 LOCTITE 404 Supplier #: 46551 Required: 10/31/10 Requested By: STOCKROOM	6.00	EA	\$13.12	\$78.72	\$0.00	\$78.72	63305	5203

Supplier
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 Phone Number (248) 583-8600
 Fax Number (248) 583-8635
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, PP & ADD
 Shipper UPS
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order No		Confirming Order Yes		Tax Exempt Yes		Non-Exempt No		MSDS Required No	
Confirm To WEB				10/21/2010					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	948593 LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147. Supplier #: 51147 Required: 10/29/10 Requested By: STOCKROOM	1.00	EA	\$8.24	\$8.24	\$0.00	\$8.24	63305	5100
9	944121 ENDS - SNAP RING, P/N RP71001R Supplier #: RP71001R Required: 07/04/10 Requested By: STOCKROOM	4.00	EA	\$19.61	\$78.44	\$0.00	\$78.44	63305	4113
	659056 BLADE - HACK SAW, POWER, 21 X 1 3/4, 6 TOOTH, P/N 61255 OR BS2106-8 Supplier #: 40127 Required: 11/13/10 Requested By: STOCKROOM	2.00	EA	\$21.50	\$43.00	\$0.00	\$43.00	63305	5100
11	804000 BELT - "V", A38. Supplier #: 38A Required: 11/01/10 Requested By: STOCKROOM	4.00	EA	\$3.35	\$13.40	\$0.00	\$13.40	63305	5100
12	101201 BEARING - RUNNER BLOCK BALL RAIL, REXROTH R165189420, PRE-GREASED, LINEAR, FOR FICEP UNLOAD ROBOT Required: 01/14/11 Requested By:	1.00	EA	\$104.55	\$104.55	\$0.00	\$104.55	63305	5100

 Order Net \$1,682.42
 Order Tax \$0.00
 Order Total \$1,682.42

Approved By KIM BOWEN (KBOWEN)

1/5/2011

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 11/19/2010

Contract #

Print Date 11/14/2011

S ellerShip ToBill To

K L MC COY AND ASSOCIATES INC.
P O BOX 24077
DETROIT, MI 48224-4077

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA

Phone Number (313) 882-9565
Fax Number (313) 882-8492

F.O.B. DEST, PP & ADD
Shipper UPS

Terms Net 30

Original Order No	Confirming Order Yes	Tax Exempt Yes	Non-Exempt No	MSDS Required No
Confirm To CAROL CHRISTY		11/19/2010		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-166584 (1) TACO F1-2507, 3" X 2-1/2" BASE MOUNTED SUCTION PUMP. RATED FOR 400 GPM @80PSI (185') 40 HP, 3500 RPM 460 VOLT 3 PHASE MOTOR DAVE STRUBLE Supplier #: TACO F1-2507 Task #: 164275*3 Required: 01/05/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$2,628.00	\$2,628.00	\$0.00	\$2,628.00	63410	5500

Order Net	\$2,628.00
Order Tax	\$0.00
Order Total	\$2,628.00

Approved By VIRGINIA ZOTTER (VZOTTER)

11/19/2010

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Status Matched
 Amendment
 PO Date 11/22/2010
 Contract #
 Print Date 11/14/2011

Seller

D G R CONTRACTING
 390 N. DECKER RD.
 MARLETTE, MI 48453

Phone Number (989) 635-7354
 Fax Number (989) 635-6664

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2%/10, n30

Original Order No	Confirming Order Yes	Tax Exempt Yes	Non-Exempt No	MSDS Required No
Confirm To FAXED TO DGR		11/22/2010		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-166624 FABRICATE 4 POTS FOR CUPRIT FURNACE DAVE STRUBLE Task #: 164275*3 Required: 11/26/10 Requested By: DAVE STRUBLE (DSTRUBLE)	4.00	EA	\$360.00	\$1,440.00	\$0.00	\$1,440.00	63410	4103
2	NS-166626 FABRICATE DRIP PAN FOR 12" ROUND CHIMINEY AT SLUDGE DRYER SCRUBBER IN WWTP DAVE STRUBLE Task #: 164275*3 Required: 11/26/10 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$240.00	\$240.00	\$0.00	\$240.00	63410	5500

Order Net	\$1,680.00
Order Tax	\$0.00
Order Total	\$1,680.00

Approved By VIRGINIA ZOTTER (VZOTTER)

11/22/2010

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<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 Phone Number (248) 583-8600
 Fax Number (248) 583-8635
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

 F.O.B. DEST, PP & ADD
 Shipper UPS
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Terms 2% 15, NET 45

Original Order No		Confirming Order Yes		Tax Exempt Yes		Non-Exempt No		MSDS Required No	
Confirm To WEB				11/29/2010					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	816760 CLAMP - HOSE, 2", STAINLESS STEEL, P/N 6832 IDEAL OR HSS32 DIXON Supplier #: HSS32 Required: 11/27/10 Requested By: STOCKROOM	20.00	EA	\$0.69	\$13.80	\$0.00	\$13.80	63305	5100
2	835916 SEALANT - SILATECH 100% SILICONE SEALANT, CLEAR -LOCTITE P/N 32389 CAULKING GUN SIZE. Supplier #: 32389 Required: 12/02/10 Requested By: STOCKROOM	2.00	EA	\$3.18	\$6.36	\$0.00	\$6.36	63305	5100
	843121 LUBRICANT - LPS 2, LPS P/N 00216 Supplier #: 00216 Required: 12/03/10 Requested By: STOCKROOM	6.00	CN	\$6.57	\$39.42	\$0.00	\$39.42	63305	5100
4	865355 TEFLON - LIQUID, LOCTITE P/N 59231 Supplier #: 59231 Required: 11/29/10 Requested By: STOCKROOM	1.00	EA	\$9.69	\$9.69	\$0.00	\$9.69	63305	5203
5	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 11/27/10 Requested By: STOCKROOM	45.00	EA	\$4.88	\$219.60	\$0.00	\$219.60	63305	5500
6	920545 "O" RING - 1/8" X 3 5/8" X 3 7/8", 4 PER PKG., P/N 568-239 Required: 11/29/10 Requested By: STOCKROOM	8.00	EA	\$0.14	\$1.14	\$0.00	\$1.14	63305	5100
7	920546 "O" RING - 1/8" X 3 3/4" X 4", 4 PER PKG., P/N 568-240 Supplier #: 568-240 Required: 11/29/10 Requested By: STOCKROOM	2.00	EA	\$0.29	\$0.57	\$0.00	\$0.57	63305	5100
	920556 "O" RING - 1/8" X 7 3/4" X 8", 1 PER PKG., P/N 568-265 Supplier #: 568-265	1.00	EA	\$0.57	\$0.57	\$0.00	\$0.57	63305	5100

Status Received
 Amendment
 PO Date 11/29/2010
 Contract #
 Print Date 11/14/2011

Supplier

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600
 Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
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F.O.B. DEST, PP & ADD
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MUELLER BRASS CO.
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 PORT HURON, MI 48060
 USA

Terms 2% 15, NET 45

Original Order No	Confirming Order Yes	Tax Exempt Yes	Non-Exempt No	MSDS Required No
Confirm To WEB		11/29/2010		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
	Required: 06/11/11								
	Requested By: STOCKROOM								
9	922794	1.00	EA	\$241.56	\$241.56	\$0.00	\$241.56	63305	5100
	COMPENSATOR - RACINE, P/N 956132								
	Supplier #: 956132								
	Required: 12/05/10								
	Requested By: STOCKROOM								

Order Net	\$532.71
Order Tax	\$0.00
Order Total	\$532.71

Approved By VIRGINIA ZOTTER (VZOTTER)

11/29/2010

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
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Supplier
 MOTION INDUSTRIES, INC
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Original Order No	Confirming Order Yes	Tax Exempt Yes	Non-Exempt No	MSDS Required No
Confirm To WEB		12/1/2010		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	817664 COCK - AIR, 1/4" WITH T HANDLE, P/N 6805 WEATHERHEAD OR 44 ESSEX Supplier #: 6805 Required: 12/11/10 Requested By: STOCKROOM	1.00	EA	\$4.35	\$4.35	\$0.00	\$4.35	63305	5100
2	920336 LUBRICANT - OPEN CHAIN, 12 PER CASE, P/N S00202 Supplier #: 00202 Required: 12/10/10 Requested By: STOCKROOM	24.00	EA	\$3.45	\$82.80	\$0.00	\$82.80	63305	5100
3	920858 LINK - HALF, P/N 140 Supplier #: 140 Required: 12/06/10 Requested By: STOCKROOM	1.00	EA	\$17.36	\$17.36	\$0.00	\$17.36	63305	5100
4	921158 BEARING - P/N 202 KDD FAFNIR, 77502 ND OR 6202-ZZ FAG Supplier #: 202KDD Required: 12/05/10 Requested By: STOCKROOM	2.00	EA	\$6.68	\$13.36	\$0.00	\$13.36	63305	5100
5	500843 FILTER - ELEMENT FOR ZINGA SUCTION FILTER SF-150-15-1&4 P/N SE-100 Supplier #: SE-100 Required: 12/17/10 Requested By: STOCKROOM	2.00	EA	\$24.13	\$48.26	\$0.00	\$48.26	63305	4113
6	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 12/05/10 Requested By: STOCKROOM	6.00	EA	\$15.65	\$93.90	\$0.00	\$93.90	63305	5100
7	950712 FILTER - ELEMENT, P/N V6011B2C05, FOR AD BUNDLER HYDRAULIC UNIT Supplier #: V6011B2C05 Required: 12/05/10 Requested By: STOCKROOM	1.00	EA	\$47.22	\$47.22	\$0.00	\$47.22	63305	5204

Supplier

MOTION INDUSTRIES, INC
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Fax Number (248) 583-8635

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Terms 2% 15, NET 45

Original Order No	Confirming Order Yes	Tax Exempt Yes	Non-Exempt No	MSDS Required No
Confirm To WEB		12/1/2010		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	948593 LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147. Supplier #: 51147 Required: 12/09/10 Requested By: STOCKROOM	1.00	EA	\$8.24	\$8.24	\$0.00	\$8.24	63305	5100
9	920160 CLAMP - "O", 7/8" NOMINAL, P/N 2023 OETIKER Supplier #: 2023 Required: 12/16/10 Requested By: STOCKROOM	3.00	EA	\$0.47	\$1.41	\$0.00	\$1.41	63305	5100
	835916 SEALANT - SILATECH 100% SILICONE SEALANT, CLEAR -LOCTITE P/N 32389 CAULKING GUN SIZE. Supplier #: 32389 Required: 12/14/10 Requested By: STOCKROOM	4.00	EA	\$3.18	\$12.72	\$0.00	\$12.72	63305	5100
11	843121 LUBRICANT - LPS 2, LPS P/N 00216 Supplier #: 00216 Required: 12/15/10 Requested By: STOCKROOM	6.00	CN	\$6.57	\$39.42	\$0.00	\$39.42	63305	5100
12	920450 "O" RING - 3/32 X 7/16 X 5/8, 20 PER PKG, P/N 568-111 Supplier #: 111 BUNA Required: 12/10/10 Requested By: STOCKROOM	1.00	EA	\$0.34	\$0.34	\$0.00	\$0.34	63305	5100
13	926032 INSERT - RUBBER FOR FC BOSTON COUPLING, P/N XFCR-25 Supplier #: XFCR-25 Required: 12/11/10 Requested By: STOCKROOM	1.00	EA	\$26.54	\$26.54	\$0.00	\$26.54	63305	5100
14	832440 FILTER - AIR, THROWAWAY, 16" X 20" X 1" Supplier #: 16 X 20 X 1 Required: 12/07/10 Requested By: STOCKROOM	24.00	EA	\$1.36	\$32.64	\$0.00	\$32.64	63305	5100

Supplier

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600
 Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, PP & ADD
 Shipper UPS

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order No		Confirming Order Yes		Tax Exempt Yes		Non-Exempt No		MSDS Required No	
Confirm To WEB				12/1/2010					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
15	944205 VALVE - ITEM/POS 12 PRESSURE VALVE FOR MARX HOODS, P/N TYP- WUVPB-1MCO-10-1 24V+DC12. Supplier #: WUVPB-1MCO-10-1-24V P/N 400555394 Required: 01/24/11 Requested By: STOCKROOM	1.00	EA	\$259.63	\$259.63	\$0.00	\$259.63	63305	4103
16	951008 BEARING - FOR LARGE CENTRIFUGE IN FINISH BAY, SKF 6208-2RS JEM Supplier #: 6208 2RS JEM Required: 12/04/10 Requested By: STOCKROOM	2.00	EA	\$51.94	\$103.88	\$0.00	\$103.88	63305	4108
17	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 12/11/10 Requested By: STOCKROOM	45.00	EA	\$4.88	\$219.60	\$0.00	\$219.60	63305	5500
18	944117 FILTER - ELEMENT, DONALDSON P/N P171533, FOR AD BUNDLER STRAPPING UNIT Required: 01/13/11 Requested By:	1.00	EA	\$30.49	\$30.49	\$0.00	\$30.49	63305	5100

Order Net	\$1,042.16
Order Tax	\$0.00
Order Total	\$1,042.16

Approved By DIANE LANGOLF (DLANGOLF)

2/22/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier
 MARSHALL E. CAMPBELL
 P O BOX 610947
 PORT HURON, MI 48061-0947

Phone Number (810) 985-7106

Fax Number 985-6111

Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

F.O.B. DEST, PP & ADD

Shipper DELIVERY

Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA

Terms 2% 30, NET 45

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	659139 WHEEL - GRINDING, 9 X 1/4 SBSA, 6000 RPM, COOLIE HAT, NORTON P/N 66253049016, TYPE 27 Supplier #: NOR66253049106***** Required: 12/20/10 Requested By: STOCKROOM	2.00	EA	\$8.30	\$16.60	\$0.00	\$16.60	63305	5100
1	659139 WHEEL - GRINDING, 9 X 1/4 SBSA, 6000 RPM, COOLIE HAT, NORTON P/N 66253049016, TYPE 27 Supplier #: NOR66253049106***** Requested By: STOCKROOM	2.00	EA	\$8.30	\$16.60	\$0.00	\$16.60	63305	5100
4	640436 LAMP - METALARC SYLVANIA M90/0 MPD100/U/MED/840. FOR #4 CASTER. Supplier #: SYLMP100UMED Required: 12/15/10 Requested By: STOCKROOM	1.00	EA	\$25.30	\$25.30	\$0.00	\$25.30	63305	4101
3	811907 BUSHING - REDUCING, 3/4" TO 1/2", CROUSE HINDS P/N RE 21 Supplier #: RE 21 Required: 12/20/10 Requested By: STOCKROOM	1.00	EA	\$2.50	\$2.50	\$0.00	\$2.50	63305	5100
4	814416 CAP - GROUNDING METAL CORD GRIP, P/N 215 EAG Supplier #: 1709***** Required: 12/15/10 Requested By: STOCKROOM	3.00	EA	\$4.05	\$12.15	\$0.00	\$12.15	63305	5100
5	816625 CLAMP - BEAM, 1", IRON, P/N BH-500 APPLETON OR 1S-500 GEDNEY Supplier #: 1S-500 Required: 12/20/10 Requested By: STOCKROOM	5.00	EA	\$0.43	\$2.15	\$0.00	\$2.15	63305	5100
6	821512 CONDUIT - GALVANIZED, 1/2", 10 FT. LENGTH'S Supplier #: CONRIG1/2***** Required: 12/14/10 Requested By: STOCKROOM	20.00	FT	\$1.87	\$37.40	\$0.00	\$37.40	63305	5100

Supplier

MARSHALL E. CAMPBELL
P O BOX 610947
PORT HURON, MI 48061-0947

Phone Number (810) 985-7106
Fax Number 985-6111

Ship To

MUELLER BRASS CO.
Receiving
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PORT HURON, MI 48060
USA
F.O.B. DEST, PP & ADD
Shipper DELIVERY

Bill To

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Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 30, NET 45

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
7	821648 CONNECTOR - 1/2" NPT X .375-.500 CABLE, HUBBELL P/N SHC-1023-ZP Supplier #: HUBSHC1023ZP***** Required: 12/20/10 Requested By: STOCKROOM	5.00	EA	\$3.43	\$17.15	\$0.00	\$17.15	63305	5100
8	837744 HOSE - AIR, 1/2", 4 SPIRAL, 2 BRAID, NON-CONDUCTIVE, 300 PSI W.P., THERMOID MAXECON, GOODYEAR P/N 569-008-127 Supplier #: GOO569-008-127***** Required: 12/17/10 Requested By: STOCKROOM	100.00	FT	\$0.90	\$90.00	\$0.00	\$90.00	63305	5100
	841176 HOLDER - LAMP P/N 150L STONCO+ Supplier #: 30010MUL Required: 12/20/10 Requested By: STOCKROOM	4.00	EA	\$3.63	\$14.52	\$0.00	\$14.52	63305	5100
10	844952 NIPPLE - 1/2", P/N 842 T&B, 750 IT GEDNEY OR CN-50 APPLETON Supplier #: 750 T GEDNEY Required: 12/14/10 Requested By: STOCKROOM	10.00	EA	\$1.42	\$14.20	\$0.00	\$14.20	63305	5100
11	635746 GLOVE - CANVAS, KNIT WRIST, P/N T83 Supplier #: 8100A Required: 12/17/10 Requested By: STOCKROOM	300.00	PR	\$0.44	\$132.00	\$0.00	\$132.00	63305	5203
12	821599 CONDUIT - FLEXIBLE, 1/2" SEALTITE, METALLIC, P/N 1/2STCUT Supplier #: CONSEALT1/2CUT***** Required: 12/16/10 Requested By: STOCKROOM	100.00	FT	\$0.81	\$80.82	\$0.00	\$80.82	63305	5100
13	846513 NUT - 5/16" W/ SPRING, P/N N223 B- LINE OR P1007 UNISTRUT Supplier #: N223PLTD Required: 12/21/10 Requested By: STOCKROOM	4.00	EA	\$1.74	\$6.95	\$0.00	\$6.95	63305	5100

Supplier
 MARSHALL E. CAMPBELL
 P O BOX 610947
 PORT HURON, MI 48061-0947

 Phone Number (810) 985-7106
 Fax Number 985-6111
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
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 PORT HURON, MI 48060
 USA
 Terms 2% 30, NET 45

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
14	880318 TAP - STD., 1-8, BOTTOMING MUST BE FOR STEEL Supplier #: HAW32018***** Required: 12/25/10 Requested By: STOCKROOM	1.00	EA	\$43.25	\$43.25	\$0.00	\$43.25	63305	5100
15	920156 COUPLING - HOSE, 1", SWIVEL, FEMALE, JIC 37 DEG, PARKER P/N 10643-16-16 Supplier #: PAR10643-16-16-S Required: 12/19/10 Requested By: STOCKROOM	6.00	EA	\$12.19	\$73.14	\$0.00	\$73.14	63305	5100
	920735 SHACKLE - ANCHOR, 7/16" STEEL, DROP FORGED, THREADED, P/N G209 CROSBY Supplier #: G209-7/16 Required: 12/15/10 Requested By: STOCKROOM	2.00	EA	\$6.17	\$12.34	\$0.00	\$12.34	63305	5100
17	NS-167082 HYD. HOSE 1 1/2" 13' LONG WITH 37 DEGREE ON ONE END AND STR. THREADS ON OPPOSITE END BOB KINNEY Task #: 182217*1 Required: 12/21/10 Requested By: BOB KINNEY (BKINNEY)	1.00	EA	\$248.83	\$248.83	\$0.00	\$248.83	63305	4103

Order Net	\$845.90
Order Tax	\$0.00
Order Total	\$845.90

Approved By VIRGINIA ZOTTER (VZOTTER)

12/14/2010

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 Phone Number (248) 583-8600
 Fax Number (248) 583-8635
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order No	Confirming Order Yes	Tax Exempt Yes	Non-Exempt No	MSDS Required No
Confirm To RON		12/14/2010		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 12/21/10 Requested By: STOCKROOM	90.00	EA	\$4.88	\$439.20	\$0.00	\$439.20	63305	5500
2	837800 HOSE - WATER, 3/4", 300 PSI, 2 BRAID, CORRUGATED, GOODYEAR - WINGFOOT Required: 12/25/10 Requested By:	250.00	FT	\$0.62	\$155.00	\$0.00	\$155.00	63305	5500

Order Net	\$594.20
Order Tax	\$0.00
Order Total	\$594.20

Approved By VIRGINIA ZOTTER (VZOTTER)

12/14/2010

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<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

SupplierShip ToBill To

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600
 Fax Number (248) 583-8635

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON		2/14/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 STRUBLE Supplier #: MB3-30 Required: 02/19/11 Requested By: DAVE STRUBLE (DSTRUBLE)	90.00	EA	\$4.88	\$439.20	\$0.00	\$439.20	63305	5500
2	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 02/15/11 Requested By: GARY GOFTON (GGOFTON)	2.00	EA	\$16.60	\$33.20	\$0.00	\$33.20	63305	5100

Order Net	\$472.40
Order Tax	\$0.00
Order Total	\$472.40

Approved By DIANE LANGOLF (DLANGOLF)

2/14/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

SupplierShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B. DEST, FRT ALLOWED
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 15, NET 45

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Original Order Yes
Confirm To RON

Confirming Order No

Tax Exempt No
2/16/2011

Non-Exempt No

MSDS Required No

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	924492 OIL - HYD. JACK LUBRIPLATE, LOCTITE Supplier #: 30523 Required: 02/21/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	GL	\$12.80	\$12.80	\$0.00	\$12.80	63305	5100
2	816667 CLAMP - HOSE, 1/2", STAINLESS STEEL, P/N HSS 8 DIXON OR 6808 IDEAL Supplier #: HSS8 Required: 02/16/11 Requested By: GARY GOFTON (GGOFTON)	10.00	EA	\$0.65	\$6.50	\$0.00	\$6.50	63305	5100
	816740 CLAMP - HOSE, 3/4", STAINLESS STEEL, DIXON P/N HSS12 Supplier #: HSS12 Required: 02/18/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	EA	\$0.67	\$6.70	\$0.00	\$6.70	63305	5100
4	920523 "O" RING - 1/16 X 13/16 X 15/16, 10 PER PKG, P/N 019 BUNA Supplier #: 568-019 Required: 02/22/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$0.34	\$0.34	\$0.00	\$0.34	63305	5100
5	943429 ADHESIVE - "O" RING, P/N 46551 LOCTITE 404 Supplier #: 46551 Required: 02/24/11 Requested By: L. AINSWORTH (LAINSWOR)	3.00	EA	\$13.12	\$39.36	\$0.00	\$39.36	63305	5203
6	920336 LUBRICANT - OPEN CHAIN, 12 PER CASE, P/N S00202 Supplier #: 00202 Required: 02/25/11 Requested By: L. AINSWORTH (LAINSWOR)	24.00	EA	\$3.45	\$82.80	\$0.00	\$82.80	63305	5100
7	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 02/23/11 Requested By: L. AINSWORTH (LAINSWOR)	90.00	EA	\$4.88	\$439.20	\$0.00	\$439.20	63305	5500



Amendment

PO Date 2/16/2011

Contract #

Print Date 11/14/2011

S lierShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B. DEST, FRT ALLOWED
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 15, NET 45

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Original Order Yes
Confirm To RON

Confirming Order No

Tax Exempt No
2/16/2011

Non-Exempt No

MSDS Required No

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	923972 LINK - MASTER FOR NATIONAL CONV. DWG. E-1180-4, P/N 100-H, NOT-SU Supplier #: 100H Required: 02/21/11 Requested By: GARY GOFTON (GGOFTON)	3.00	EA	\$4.76	\$14.28	\$0.00	\$14.28	63305	4103

Order Net \$601.98

Order Tax \$0.00

Order Total \$601.98

Approved By DIANE LANGOLF (DLANGOLF)

2/16/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
http://www.muellerindustries.com UNDER "PRODUCTS AND SERVICES"

Supplier
 PROFESSIONAL PUMP INC.
 41300 COCA COLA DRIVE
 BELLEVILLE, MI 48111

Phone Number (734) 394-7878

Fax Number (734) 394-7867

Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.

Shipper

Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-168514 Sodium Hypochlorite Metering Pump -24GPD @ 100PSI MAX STRUBLE Supplier #: LPB4SA-KTC1-520 Task #: 182217*2 Required: 02/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$673.00	\$673.00	\$0.00	\$673.00	63305	5500

Order Net	\$673.00
Order Tax	\$0.00
Order Total	\$673.00

Approved By DIANE LANGOLF (DLANGOLF)

2/21/2011

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
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Supplier

MAR COR PURIFICATION
 3250 HARVESTER ROAD
 UNIT 6
 BURLINGTON, ON L7N 3W9
 CANADA
 Phone Number (905) 639-7025
 Fax Number

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-168580 4080028 BEARING PLATE FOR RO UNIT WESTBROOK Task #: 173748*1 Required: 03/01/11 Requested By: DOUG WESTBROOK (DWESTBRO)	2.00	EA	\$148.84	\$297.68	\$0.00	\$297.68	66808	5500

Order Net	\$297.68
Order Tax	\$0.00
Order Total	\$297.68

Approved By DIANE LANGOLF (DLANGOLF)

2/22/2011

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SupplierShip ToBill To
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper

 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

 Phone Number (248) 583-8600
 Fax Number (248) 583-8635

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON		3/2/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 03/08/11 Requested By: L. AINSWORTH (LAINSWOR)	90.00	EA	\$4.88	\$439.20	\$0.00	\$439.20	63305	5500
2	920516 "O" RING - 1/4 X 13 1/2 X 14, 10 PER. PKG., P/N 568-456 MOLDS Supplier #: 456 BUNA Required: 03/05/11 Requested By: L. AINSWORTH (LAINSWOR)	20.00	EA	\$1.28	\$25.60	\$0.00	\$25.60	63305	5100
3	659048 BLADE - HACK SAW, POWER, 21 X 1 3/4, 4 TOOTH, P/N 40126 Supplier #: 40126 Required: 04/03/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$18.82	\$37.64	\$0.00	\$37.64	63305	5100
4	924492 OIL - HYD. JACK LUBRIPLATE, LOCTITE Supplier #: 30523 Required: 03/06/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	GL	\$12.80	\$12.80	\$0.00	\$12.80	63305	5100

Order Net	\$515.24
Order Tax	\$0.00
Order Total	\$515.24

Approved By DIANE LANGOLF (DLANGOLF)

3/2/2011

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Supplier

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 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

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 Fax Number (248) 583-8635

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 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper

Bill To

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 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order Yes		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Confirm To RON				3/9/2011					
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 03/16/11 Requested By: L. AINSWORTH (LAINSWOR)	90.00	EA	\$4.88	\$439.20	\$0.00	\$439.20	63305	5500
2	659056 BLADE - HACK SAW, POWER, 21 X 1 3/4, 6 TOOTH, P/N 61255 OR BS2106-8 Supplier #: 40127 Required: 03/26/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$18.82	\$37.64	\$0.00	\$37.64	63305	5100
3	948593 LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147. Supplier #: 51147 Required: 03/14/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$8.59	\$8.59	\$0.00	\$8.59	63305	5100
4	920160 CLAMP - "O", 7/8" NOMINAL, P/N 2023 OETIKER Supplier #: 2023 Required: 03/19/11 Requested By: L. AINSWORTH (LAINSWOR)	3.00	EA	\$0.47	\$1.41	\$0.00	\$1.41	63305	5100
5	843121 LUBRICANT - LPS 2, LPS P/N 00216 Supplier #: 00216 Required: 03/16/11 Requested By: L. AINSWORTH (LAINSWOR)	6.00	CN	\$7.00	\$42.00	\$0.00	\$42.00	63305	5100
6	835916 SEALANT - SILATECH 100% SILICONE SEALANT, CLEAR -LOCTITE P/N 32389 CAULKING GUN SIZE. Supplier #: 32389 Required: 03/16/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$3.31	\$6.62	\$0.00	\$6.62	63305	5100
7	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 03/12/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$16.60	\$33.20	\$0.00	\$33.20	63305	5100

S upplierMOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311Phone Number (248) 583-8600
Fax Number (248) 583-8635Ship ToMUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B. DEST, FRT ALLOWED
ShipperBill ToMUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 15, NET 45

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON		3/9/2011		

Order Net	\$568.66
Order Tax	\$0.00
Order Total	\$568.66

Approved By DIANE LANGOLF (DLANGOLF)

3/9/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Status Received
 Amendment
 PO Date 3/10/2011
 Contract #
 Print Date 11/14/2011

S lierShip ToBill To

ROCHESTER MIDLAND CORPORATION
 333 HOLLENBECK STREET
 ROCHESTER, NY 14621

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Phone Number (585) 336-2200

Fax Number (585) 266-1606

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-169076 PURCHASE OF WATER SOFTENER FOR TREATMENT OF FEEDWATER IN THE RO SYSTEM- BILLED IN \$1500 DOLLAR MONTHLY INSTALLMENTS Task #: 182217*2 Required: 03/16/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$0.00	\$0.00	\$0.00	\$0.00	63305	5500
2	NS-169077 APRIL PAYMENT STRUBLE Task #: 182217*2 Required: 04/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
	NS-169078 MAY PAYMENT STRUBLE Task #: 182217*2 Required: 05/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
4	NS-169079 JUNE PAYMENT STRUBLE Task #: 182217*2 Required: 06/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
5	NS-169080 JULY PAYMENT STRUBLE Task #: 182217*2 Required: 07/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
6	NS-169081 AUGUST PAYMENT STRUBLE Task #: 182217*2 Required: 08/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
7	NS-169082 SEPTEMBER PAYMENT STRUBLE Task #: 182217*2 Required: 09/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500

Supplier

ROCHESTER MIDLAND CORPORATION
 333 HOLLENBECK STREET
 ROCHESTER, NY 14621

Phone Number (585) 336-2200

Fax Number (585) 266-1606

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Confirm To									
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	NS-169083 OCTOBER PAYMENT STRUBLE Task #: 182217*2 Required: 10/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
9	NS-169084 NOVEMBER PAYMENT STRUBLE Task #: 182217*2 Required: 11/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
10	NS-169085 DECEMBER PAYMENT STRUBLE Task #: 182217*2 Required: 12/25/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
11	NS-169086 JANUARY PAYMENT STRUBLE Task #: 182217*2 Required: 01/25/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
12	NS-169087 FEBRUARY PAYMENT STRUBLE Task #: 182217*2 Required: 02/25/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
13	NS-169088 MARCH PAYMENT STRUBLE Task #: 182217*2 Required: 03/25/12 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,500.00	\$1,500.00	\$0.00	\$1,500.00	63305	5500
						Order Net	\$18,000.00		
						Order Tax	\$0.00		
						Order Total	\$18,000.00		

Approved By DIANE LANGOLF (DLANGOLF)

3/10/2011

Supplier

ROCHESTER MIDLAND CORPORATION
 333 HOLLENBECK STREET
 ROCHESTER, NY 14621

Phone Number (585) 336-2200
 Fax Number (585) 266-1606

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To KEVIN		3/14/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-169138 BIO DISPERSANT FOR WWTP SAND FILTER WESTBROOK Task #: 173748*1 Required: 03/21/11 Requested By: DOUG WESTBROOK (DWESTBRO)	2.00	EA	\$135.20	\$270.40	\$0.00	\$270.40	66808	5500

Order Net	\$270.40
Order Tax	\$0.00
Order Total	\$270.40

Approved By DIANE LANGOLF (DLANGOLF)

3/14/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 3/18/2011

Contract #

Print Date 11/14/2011

Supplier

CHEM-AQUA
1331 WEST LAKE DRIVE
NOVI, MI 48377

Phone Number (800) 631-0990

Fax Number (248) 960-1409

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms

Original Order Yes Confirming Order No Tax Exempt No Non-Exempt No MSDS Required No
Confirm To RITA 3/18/2011

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-169291 RO CHEMICAL MB224 WESTBROOK Task #: 173748*1 Required: 03/28/11 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$403.20	\$403.20	\$0.00	\$403.20	66808	5500

Order Net \$403.20
Order Tax \$0.00
Order Total \$403.20

Approved By DIANE LANGOLF (DLANGOLF)

3/18/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
www.muellerindustries.com UNDER "PRODUCTS AND SERVICES"

Supplier
 INTERSTATE CHEMICAL CO., INC.
 3720 S. VENNOY ROAD
 WAYNE, MI 48184

 Phone Number {800}4222436
 Fax Number (734) 721-8483
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DESTINATION
 Shipper INTERSTATE CHEM
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To HOLLY		3/22/1977		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-169294 TOTE OF SODIUM HYPOCHLORITE SOLUTION 12 - 15% WESTBROOK Task #: 173748*1 Required: 03/28/11 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$437.25	\$437.25	\$0.00	\$437.25	66808	5500
2	NS-170092 330 GTOT SODIUM HYPOCHLORITE 15%, CONTAINER DEP, ETC INV 988375 3 24 11 WESTBROOK Task #: 173748*1 Required: 04/19/11 Requested By:	1.00	EA	\$813.18	\$813.18	\$0.00	\$813.18	66808	5500

Order Net	\$1,250.43
Order Tax	\$0.00
Order Total	\$1,250.43

Approved By DIANE LANGOLF (DLANGOLF)

3/22/2011

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier

MAR COR PURIFICATION
 3250 HARVESTER ROAD
 UNIT 6
 BURLINGTON, ON L7N 3W9
 CANADA
 Phone Number (905) 639-7025
 Fax Number

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-169761 REVERSE OSMOSIS MEMBRANE STEM CONNECTION STRUBLE Supplier #: 4080309 Task #: 182217*2 Required: 04/06/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$60.80	\$60.80	\$0.00	\$60.80	63305	5500

Order Net	\$60.80
Order Tax	\$0.00
Order Total	\$60.80

Approved By DIANE LANGOLF (DLANGOLF)

4/1/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment 1

PO Date 4/13/2011

Contract #

Print Date 11/14/2011

Supplier

CHEM-AQUA
1331 WEST LAKE DRIVE
NOVI, MI 48377

Phone Number (800) 631-0990
Fax Number (248) 960-1409

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B.
Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-170122 MB-38 BIOCID, 500# DR Task #: 173720*1 Required: 04/19/11 Requested By: ERIC RADER (ERADER)	1,900.00	LB	\$0.65	\$1,235.00	\$0.00	\$1,235.00	63300	5500

Order Net	\$1,235.00
Order Tax	\$0.00
Order Total	\$1,235.00

Approved By DIANE LANGOLF (DLANGOLF)

4/13/2011

and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
http://www.muellerindustries.com UNDER "PRODUCTS AND SERVICES"

Supplier

BLUE WATER MAINTENANCE, INC.
 9082 BIG HAND ROAD
 COLUMBUS, MI 48063

Phone Number (586) 727-7043
 Fax Number (810) 727-8153

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-171490 INSTALLATION OF WATER SOFTENER IN WWTP - MATERIAL COST STRUBLE Task #: 164275*4 Required: 06/01/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,136.81	\$1,136.81	\$0.00	\$1,136.81	63410	5500
2	NS-171491 LABOR ON 5/18/11 AND 05/20/11 Task #: 164275*4 Required: 06/01/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$2,731.58	\$2,731.58	\$0.00	\$2,731.58	63410	5500

Order Net	\$3,868.39
Order Tax	\$0.00
Order Total	\$3,868.39

Approved By DIANE LANGOLF (DLANGOLF)

5/26/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier
 PROFESSIONAL PUMP INC.
 41300 COCA COLA DRIVE
 BELLEVILLE, MI 48111

 Phone Number (734) 394-7878
 Fax Number (734) 394-7867
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-171754 MARCH SINGLE PHASE PUMP STRUBLE Supplier #: MARCH MODEL TE-5.5C-MD-1PH Task #: 182217*3 Required: 06/14/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$497.00	\$497.00	\$0.00	\$497.00	63305	5500

Order Net	\$497.00
Order Tax	\$0.00
Order Total	\$497.00

Approved By DIANE LANGOLF (DLANGOLF)

6/8/2011

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 Phone Number (248) 583-8600
 Fax Number (248) 583-8635
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order No		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Confirm To									
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	803672 BELT - "V", 3L350 DODGE, 1350 GATES, 3L350 BROWNING Supplier #: 3L350 Required: 06/08/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$2.85	\$2.85	\$0.00	\$2.85	63305	5100
2	920160 CLAMP - "O", 7/8" NOMINAL, P/N 2023 OETIKER Supplier #: 2023 Required: 06/13/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	EA	\$0.47	\$4.70	\$0.00	\$4.70	63305	5100
3	920172 CLAMP - HOSE, 4", P/N 6872 IDEAL OR HSS72 Supplier #: HSS72 Required: 06/07/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	EA	\$1.16	\$11.60	\$0.00	\$11.60	63305	5100
4	924471 OIL - THREAD CUTTING, PREMIUM DARK, RIDGID P/N 70830 Supplier #: 70830 Required: 06/09/11 Requested By: GRANT CANHAM (GCANHAM)	1.00	EA	\$14.89	\$14.89	\$0.00	\$14.89	63305	5100
5	920099 LINK - OFFSET FOR #80 CHAIN, PIN TYPE, P/N RC-80 L/B OR REX OR MORSE Supplier #: 80 OFFSET Required: 05/27/11 Requested By: L. AINSWORTH (LAINSWOR)	8.00	EA	\$4.98	\$39.84	\$0.00	\$39.84	63305	5100
6	948601 ADHESIVE - BEARING MOUNT, 50 CC BOTTLE, LOCTITE Supplier #: 08531 Required: 05/30/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$34.54	\$34.54	\$0.00	\$34.54	63305	5203
7	843121 LUBRICANT - LPS 2, LPS P/N 00216 Supplier #: 00216 Required: 06/11/11 Requested By: L. AINSWORTH (LAINSWOR)	6.00	CN	\$7.00	\$42.00	\$0.00	\$42.00	63305	5100

Supplier
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
8	948593 LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147. Supplier #: 51147 Required: 06/08/11 Requested By: GRANT CANHAM (GCANHAM)	5.00	EA	\$8.59	\$42.95	\$0.00	\$42.95	63305	5100
9	920341 HOSE - 1", 2 BRAID, BLACK, 200 PSI, P/N 300 BFG BLACK WINGFOOT GOODYEAR Supplier #: ADAPTA FLEX 1" BLACK Required: 06/10/11 Requested By: L. AINSWORTH (LAINSWOR)	100.00	FT	\$1.24	\$124.00	\$0.00	\$124.00	63305	5100
10	NS-171710 81409, PERMATHEX HIGH TEMP SILICONE GASKET MAKER, 26C Task #: 173720*1 Required: 06/05/11 Requested By: MIKE CARWILE (MCARWILE)	20.00	EA	\$10.52	\$210.40	\$0.00	\$210.40	63300	4103
11	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 06/12/11 Requested By: L. AINSWORTH (LAINSWOR)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

Order Net	\$986.77
Order Tax	\$0.00
Order Total	\$986.77

Approved By DIANE LANGOLF (DLANGOLF)

6/6/2011

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

S lierShip ToBill To
 HAMMAR CONTRACTING, L.L.C
 1177 WADHAMS RD.
 SMITH CREEK, MI 48074

 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

 Phone Number (810) 367-3037
 Fax Number (810) 367-8414

Original Order No	Confirming Order Yes	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To FAX		6/15/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-171926 COST OF CRANE AND LABOR TO INSTALL A NEW WATER STORAGE TANK AT R-DRYER STRUBLE Task #: 164275*4 Required: 06/21/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$370.00	\$370.00	\$0.00	\$370.00	63410	5101
2	NS-171931 COST OF STONE AND TRUCKING TO HAUL 2 LOADS OF 21A BROWN AND DUMP NEAR BUILDING A - AND 1 LOAD OF 6A AND DUMP UNDER NEW COOLING TOWER STRUBLE Task #: 127092*2 Required: 06/21/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,282.00	\$1,282.00	\$0.00	\$1,282.00	63420	5100
3	NS-171922 COST TO DELIVER 10 YARDS OF 9 BAG WITH MESH, HAT WATER AND 1% CHLORIDE FOR R-DRYER COOLING TOWER SUPPORTS STRUBLE Task #: 164275*4 Required: 06/21/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,294.60	\$1,294.60	\$0.00	\$1,294.60	63410	5101
4	NS-171928 30 YARD DUMPSTER - 9 TON LIMIT(2 FOR BUILDING A CLEAN UP AND 4 FOR CASTING SHOP CLEAN UP) STRUBLE Task #: 182217*4 Required: 06/21/11 Requested By: DAVE STRUBLE (DSTRUBLE)	6.00	EA	\$400.00	\$2,400.00	\$0.00	\$2,400.00	63305	5100
5	NS-171924 COST OF LABOR AND EQUIPMENT TO INSTALL NEW WATER SOFTENER TANK ON A PLATFORM IN WWTP STRUBLE Task #: 164275*4 Required: 06/21/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$925.00	\$925.00	\$0.00	\$925.00	63410	5500



Status Matched
 Amendment
 PO Date 6/15/2011
 Contract #
 Print Date 11/14/2011

Supplier

HAMMAR CONTRACTING, L.L.C
 1177 WADHAMS RD.
 SMITH CREEK, MI 48074

Phone Number (810) 367-3037
 Fax Number (810) 367-8414

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No	Confirming Order Yes	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To FAX		6/15/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
6	NS-171925 COST OF LABOR, EQUIPMENT AND MATERIALS TO BUILD AND INSTALL A PLATFORM TO HOLD SOFTENER TANK. STRUBLE Task #: 164275*4 Required: 06/21/11 Requested By: DAVE STRUBLE (DSTRUBLE)	1.00	EA	\$1,985.00	\$1,985.00	\$0.00	\$1,985.00	63410	5500
7	NS-171940 COST OF LABOR AND EQUIPMENT TO CLEAN THE CHIP DRYER, ELBOW, AND AFTERBURNER ON 5/31/11. RADER Task #: 164275*4 Required: 07/08/11 Requested By: ERIC RADER (ERADER)	1.00	JO	\$1,760.00	\$1,760.00	\$0.00	\$1,760.00	63410	5101
8	NS-171941 COST OF LABOR AND EQUIPMENT TO REPAIR THE CHIP DRYER CYCLONE STACK. RADER Task #: 164275*4 Required: 07/08/11 Requested By: ERIC RADER (ERADER)	1.00	JO	\$1,750.00	\$1,750.00	\$0.00	\$1,750.00	63410	5101
9	NS-171934 COST OF LABOR, EQUIPMENT, AND MATERIALS TO TEAR APART AND REBUILD 4 MOLDS AND MACHINE 6 LINERS RADER Task #: 164275*4 Required: 07/08/11 Requested By: ERIC RADER (ERADER)	1.00	JO	\$6,900.00	\$6,900.00	\$0.00	\$6,900.00	63410	4103
10	NS-171937 COST OF LABOR AND EQUIPMENT TO REBUILD A DISTRIBUTOR WITH A NEW 3/4" PLATE BOTTOM AND DRILL NEW HOLES. RADER Task #: 164275*4 Required: 07/08/11 Requested By: ERIC RADER (ERADER)	1.00	JO	\$4,900.00	\$4,900.00	\$0.00	\$4,900.00	63410	4103

Status Matched
 Amendment
 PO Date 6/15/2011
 Contract #
 Print Date 11/14/2011

S lierShip ToBill To

HAMMAR CONTRACTING, L.L.C
 1177 WADHAMS RD.
 SMITH CREEK, MI 48074

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Phone Number (810) 367-3037
 Fax Number (810) 367-8414

Original Order No Confirming Order Yes Tax Exempt No Non-Exempt No MSDS Required No
 Confirm To FAX 6/15/2011

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
11	NS-171939 COST TO REPAIR AND STRAIGHTEN AND WELD CRACKS ON A DISTRIBUTOR AND FILL 2 HOLES AND REDRILL. RADER Task #: 164275*4 Required: 07/08/11 Requested By: ERIC RADER (ERADER)	1.00	JO	\$1,040.00	\$1,040.00	\$0.00	\$1,040.00	63410	4103

Order Net \$24,606.60
 Order Tax \$0.00
 Order Total \$24,606.60

Approved By DIANE LANGOLF (DLANGOLF)

6/15/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 6/15/2011

Contract #

Print Date 11/14/2011

Supplier

MARSHALL E. CAMPBELL
P O BOX 610947
PORT HURON, MI 48061-0947

Phone Number (810) 985-7106
Fax Number 985-6111

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B. DESTINATION
Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 30, NET 45

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	924478 COUPLER - HYD. FOR MIDGET HAND GREASE GUNS, P/N 5852 Supplier #: 5852 Required: 06/15/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$4.50	\$4.50	\$0.00	\$4.50	63305	5203
2	827596 DRILL - JOBBER, 5/16" Supplier #: 1800-5/16 Required: 06/21/11 Requested By: L. AINSWORTH (LAINSWOR)	5.00	EA	\$2.18	\$10.90	\$0.00	\$10.90	63305	5203
3	920014 FITTING - HOSE MENDER, 1/2", AEROQUIP P/N 4772-8B OR PARKER P/N 122HBL-8 Supplier #: PAR122HBL-8 Required: 06/16/11 Requested By: L. AINSWORTH (LAINSWOR)	8.00	EA	\$1.79	\$14.32	\$0.00	\$14.32	63305	4103
4	920247 COUPLING - HOSE, 3/8", SWIVEL, FEMALE, JIC 37 DEG, PARKER P/N 10643-6-6 Supplier #: PAR10643-6-6 Required: 06/17/11 Requested By: L. AINSWORTH (LAINSWOR)	6.00	EA	\$2.96	\$17.76	\$0.00	\$17.76	63305	5100
5	888008 WIRE - #14, GREEN, FLAMENOL, 19 STRAND, 600 VOLT, TYPE THHN, P/N 14THHNGRE500 Supplier #: 14THHNGRE500 Required: 06/15/11 Requested By: L. AINSWORTH (LAINSWOR)	500.00	FT	\$0.11	\$55.18	\$0.00	\$55.18	63305	5100
6	814248 CAP - ARMoured TWIST LOCK, 4 WIRE, P/N 7411C HUBBELL Supplier #: 7411C Required: 06/15/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$24.47	\$24.47	\$0.00	\$24.47	63305	5100
7	833568 FUSE - 60 AMP, 600 VOLT, FUSETRON, P/N FRSR60 BUSS OR EDIECSR60 ECONOMY Supplier #: FRSR60 Required: 06/21/11	3.00	EA	\$11.45	\$34.35	\$0.00	\$34.35	63305	5100

Supplier

MARSHALL E. CAMPBELL
 P O BOX 610947
 PORT HURON, MI 48061-0947

Phone Number (810) 985-7106
 Fax Number 985-6111

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DESTINATION
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 30, NET 45

Original Order No Confirm To		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
Requested By: L. AINSWORTH (LAINSWOR)									
8	833936 FUSE - 40 AMP, 600 VOLT, FUSETRON, P/N TRS-40R BUSS OR ECS-40 ECONOMY Supplier #: FRSR40 Required: 06/21/11	5.00	EA	\$11.45	\$57.25	\$0.00	\$57.25	63305	5100
Requested By: L. AINSWORTH (LAINSWOR)									
9	880891 TERMINAL - FORK TONGUE FOR 12-10 WIRE, 50 PER BOX, P/N TP10-10F Supplier #: 10RC10F Required: 06/16/11	1.00	BX	\$33.00	\$33.00	\$0.00	\$33.00	63305	5100
Requested By: L. AINSWORTH (LAINSWOR)									
10	881540 TIES - CABLE, 3 1/2", P/N TF-3D BURNDY Supplier #: T18S9C2 Required: 06/20/11	200.00	EA	\$0.02	\$4.00	\$0.00	\$4.00	63305	5100
Requested By: L. AINSWORTH (LAINSWOR)									
11	827593 DRILL - JOBBER, 17/64", P/N 240B VIKING Supplier #: 1830-17/64 Required: 06/15/11	2.00	EA	\$1.56	\$3.12	\$0.00	\$3.12	63305	5203
Requested By: L. AINSWORTH (LAINSWOR)									
12	827601 DRILL - JOBBER, 25/64", P/N 240B VIKING Supplier #: 1830-25/64 Required: 06/20/11	1.00	EA	\$3.53	\$3.53	\$0.00	\$3.53	63305	5203
Requested By: L. AINSWORTH (LAINSWOR)									
13	842976 LOCKNUT - CONDUIT, 1", P/N 143 T & B OR 1-100S Supplier #: 1-100S Required: 06/14/11	10.00	EA	\$0.47	\$4.70	\$0.00	\$4.70	63305	5100
Requested By: L. AINSWORTH (LAINSWOR)									
14	827607 DRILL - JOBBER, 31/64", P/N 240B VIKING Supplier #: 1830-31/64 Required: 06/15/11	1.00	EA	\$5.38	\$5.38	\$0.00	\$5.38	63305	5203
Requested By: L. AINSWORTH (LAINSWOR)									

Supplier
 MARSHALL E. CAMPBELL
 P O BOX 610947
 PORT HURON, MI 48061-0947

Phone Number (810) 985-7106

Fax Number 985-6111

Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060

USA

F.O.B.

DESTINATION

Shipper

Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060

USA

Terms

2% 30, NET 45

Original Order No Confirm To		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
15	816715 CLAMP - PIPE, 1" RIGID, P/N P1113 UNISTRUT OR B2010PLTD Supplier #: B2010PLTD Required: 06/20/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	EA	\$0.79	\$7.90	\$0.00	\$7.90	63305	5100
16	659139 WHEEL - GRINDING, 9 X 1/4 SBSA, 6000 RPM, COOLIE HAT, NORTON P/N 66253049016, TYPE 27 Supplier #: NOR66253049106***** Required: 06/20/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$8.30	\$16.60	\$0.00	\$16.60	63305	5100
	827608 DRILL - JOBBER, 1/2", P/N 08329 Supplier #: 1830-1/2 Required: 06/20/11 Requested By: L. AINSWORTH (LAINSWOR)	3.00	EA	\$5.63	\$16.89	\$0.00	\$16.89	63305	5203
18	853136 PYLET - 1", GEDNEY LB100 Required: 06/19/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$9.26	\$18.52	\$0.00	\$18.52	63305	5100
19	920056 COUPLING - HOSE, 1", SOLID MALE, PARKER P/N 10143-16-16 Supplier #: 10143-16-16 Required: 06/17/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$10.56	\$21.12	\$0.00	\$21.12	63305	5100
20	920025 COUPLER - 2", FEMALE, EVERTITE, MALABLE STEEL, P/N 200D-MI Supplier #: 200D-MI Required: 06/23/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$31.35	\$31.35	\$0.00	\$31.35	63305	4103
21	846513 NUT - 5/16" W/ SPRING, P/N N223 B- LINE OR P1007 UNISTRUT Supplier #: N223PLTD Required: 06/20/11 Requested By: L. AINSWORTH (LAINSWOR)	20.00	EA	\$1.74	\$34.77	\$0.00	\$34.77	63305	5100

Supplier
 MARSHALL E. CAMPBELL
 P O BOX 610947
 PORT HURON, MI 48061-0947

 Phone Number (810) 985-7106
 Fax Number 985-6111
Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DESTINATION
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 30, NET 45

Original Order No Confirm To		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
22	880537 TAPE - 3/4" WIDE ALL WEATHER PERMACEL ELECT., P/N 33MMM, NO-SUBS Supplier #: 3ME33***** Required: 06/20/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	EA	\$3.73	\$37.30	\$0.00	\$37.30	63305	5100
23	814416 CAP - GROUNDING METAL CORD GRIP, P/N 215 EAG Supplier #: 1709***** Required: 06/15/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	EA	\$4.05	\$40.50	\$0.00	\$40.50	63305	5100
	843120 LUBRICANT - LPS #1, AEROSOL Supplier #: 00116LPS Required: 06/17/11 Requested By: L. AINSWORTH (LAINSWOR)	6.00	CN	\$7.34	\$44.04	\$0.00	\$44.04	63305	5100
25	920753 STUD - ANCHOR, 3/4 X 8 RED HEAD P/N 7448 Supplier #: 7448RAW Required: 06/17/11 Requested By: L. AINSWORTH (LAINSWOR)	20.00	EA	\$2.87	\$57.40	\$0.00	\$57.40	63305	5100

Order Net	\$598.85
Order Tax	\$0.00
Order Total	\$598.85

Approved By DIANE LANGOLF (DLANGOLF)

6/15/2011

 Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier
 CHEM-AQUA
 1331 WEST LAKE DRIVE
 NOVI, MI 48377

Phone Number (800) 631-0990

Fax Number (248) 960-1409

Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON JOHNSON		6/17/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-171942 BLANKET ORDER TO COVER THE COST OF RO CHEMICALS. COST NOT TO EXCEED \$6000.00. COVERS THE PERIOD FROM JUNE 20,2011 TO JULY 31, 2012 WESTBROOK Task #: 182217*4 Required: 06/21/11 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$0.01	\$0.01	\$0.00	\$0.01	63305	5500
2	NS-172430 SODIUM BISULFITE (#10187992). PLEASE USE BLANKET PURCHASE ORDER (R40238) FOR WWTP RO CHEMICALS Task #: 173748*1 Required: 07/16/11 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$399.75	\$399.75	\$0.00	\$399.75	66808	5500
3	NS-172431 ANTI-SCALANT (#10188965).PLEASE USE BLANKET PURCHASE ORDER (R40238) FOR WWTP RO Task #: 173748*1 Required: 07/16/11 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$2,619.75	\$2,619.75	\$0.00	\$2,619.75	66808	5500

Order Net	\$3,019.51
Order Tax	\$0.00
Order Total	\$3,019.51

Approved By DIANE LANGOLF (DLANGOLF)

6/17/2011

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<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Status Matched
 Amendment
 PO Date 6/20/2011
 Contract #
 Print Date 11/14/2011

S upplier

D G R CONTRACTING
 390 N. DECKER RD.
 MARLETTE, MI 48453

Phone Number (989) 635-7354
 Fax Number (989) 635-6664

Ship To

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B.
 Shipper

Bill To

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2%/10, n30

Original Order Yes Confirming Order No Tax Exempt No Non-Exempt No MSDS Required No
 Confirm To EMAIL 6/20/2011

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	NS-172043 COST OF LABOR TO INSTALL NEW SAND IN SAND FILTER WESTBROOK Task #: 173748*1 Required: 07/11/11 Requested By: DOUG WESTBROOK (DWESTBRO)	1.00	EA	\$1,344.00	\$1,344.00	\$0.00	\$1,344.00	66808	5500

Order Net \$1,344.00
 Order Tax \$0.00
 Order Total \$1,344.00

Approved By DIANE LANGOLF (DLANGOLF)

6/20/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

Supplier
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Ship To
 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper
Bill To
 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Original Order No		Confirming Order No		Tax Exempt No		Non-Exempt No		MSDS Required No	
Confirm To									
Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	832448 FILTER - AIR, THROWAWAY, 16" X 25" X 1" Supplier #: 16 X 25 X 1 Required: 07/11/11 Requested By: L. AINSWORTH (LAINSWOR)	12.00	EA	\$1.48	\$17.76	\$0.00	\$17.76	63305	5100
2	843121 LUBRICANT - LPS 2, LPS P/N 00216 Supplier #: 00216 Required: 07/08/11 Requested By: L. AINSWORTH (LAINSWOR)	6.00	CN	\$8.21	\$49.26	\$0.00	\$49.26	63305	5100
3	500843 FILTER - ELEMENT FOR ZINGA SUCTION FILTER SF-150-15-1&4 P/N SE-100 Supplier #: SE-100 Required: 07/12/11 Requested By: L. AINSWORTH (LAINSWOR) L. AINSWORTH (LAINSWOR)	2.00	EA	\$24.13	\$48.26	\$0.00	\$48.26	63305	4113
3	500843 FILTER - ELEMENT FOR ZINGA SUCTION FILTER SF-150-15-1&4 P/N SE-100 Supplier #: SE-100 Requested By: L. AINSWORTH (LAINSWOR) L. AINSWORTH (LAINSWOR)	2.00	EA	\$24.13	\$48.26	\$0.00	\$48.26	63305	4113
4	950712 FILTER - ELEMENT, P/N V6011B2C05, FOR AD BUNDLER HYDRAULIC UNIT Supplier #: V6011B2C05 Required: 07/03/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$49.25	\$49.25	\$0.00	\$49.25	63305	5204
5	920160 CLAMP - "O", 7/8" NOMINAL, P/N 2023 OETIKER Supplier #: 2023 Required: 07/07/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	EA	\$0.47	\$4.70	\$0.00	\$4.70	63305	5100
6	804100 BELT - "V", B62 Required: 07/03/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$7.14	\$7.14	\$0.00	\$7.14	63305	5100
	816744 CLAMP - HOSE, 1 1/4" STAINLESS STEEL, P/N 6820 OR HSS20 Supplier #: HSS20	10.00	EA	\$0.71	\$7.10	\$0.00	\$7.10	63305	5100

SupplierShip ToBill To

MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper

MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

Phone Number (248) 583-8600
 Fax Number (248) 583-8635

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
	Required: 07/01/11								
	Requested By: L. AINSWORTH (LAINSWOR)								
8	500844 FILTER - ELEMENT FOR ZINGA SUCTION FILTER SF-100-15-1&5 ZINGA P/N SE-25 FOR ACCO HYDR Supplier #: SE-25 Required: 07/04/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$9.03	\$9.03	\$0.00	\$9.03	63305	4113
9	816752 CLAMP - HOSE, 1 1/2", P/N 5428 IDEAL OR HS28 DIXON Supplier #: HS28 Required: 07/04/11 Requested By: L. AINSWORTH (LAINSWOR)	20.00	EA	\$0.55	\$11.00	\$0.00	\$11.00	63305	5100
10	948601 ADHESIVE - BEARING MOUNT, 50 CC BOTTLE, LOCTITE Supplier #: 08531 Required: 07/02/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$34.54	\$34.54	\$0.00	\$34.54	63305	5203
11	948593 LUBRICANT - NEVER-SEEZ & LUBRICATING COMPOUND, P/N NSBT-8N 8 OZ. HI HEAT UP TO 2400 F, LOCTITE 51147. Supplier #: 51147 Required: 07/04/11 Requested By: L. AINSWORTH (LAINSWOR)	5.00	EA	\$8.59	\$42.95	\$0.00	\$42.95	63305	5100
12	500102 BELT - DRIVE, FOR 5 EXT RUNOUT TABLE, P/N 16AT10-1250 AMETRIC Supplier #: 16AT10-1250 Required: 07/11/11 Requested By: L. AINSWORTH (LAINSWOR)	7.00	EA	\$52.76	\$369.32	\$0.00	\$369.32	63305	4113
13	923971 CHAIN - COTTERED, 1 1/4" PITCH; NAT CHIP CONV DWG. E-1180-4, MORSE P/N 100-H Supplier #: 100H Required: 06/20/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	FT	\$30.29	\$302.90	\$0.00	\$302.90	63305	5100

SupplierShip ToBill To
 MOTION INDUSTRIES, INC
 P O BOX 1057
 6576 DIPLOMAT DRIVE
 STERLING HEIGHTS, MI 48311

 MUELLER BRASS CO.
 Receiving
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 F.O.B. DEST, FRT ALLOWED
 Shipper

 MUELLER BRASS CO.
 Accounts Payable
 2199 LAPEER AVE.
 PORT HURON, MI 48060
 USA
 Terms 2% 15, NET 45

 Phone Number (248) 583-8600
 Fax Number (248) 583-8635

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
14	950152 SPROCKET - 60BS13 X 1-3/8" BORE, FOR 3 BRASS FURNACE GEARBOX Supplier #: 60BS13 X 1-3/8" Required: 06/22/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$13.20	\$13.20	\$0.00	\$13.20	11240	
15	832344 FILTER - AIR, THROWAWAY, 10 1/2" X 23 1/2" X 1/2" Required: 07/04/11 Requested By: L. AINSWORTH (LAINSWOR)	12.00	EA	\$5.07	\$60.84	\$0.00	\$60.84	63305	5100
16	920516 "O" RING - 1/4 X 13 1/2 X 14, 10 PER. PKG., P/N 568-456 MOLDS Supplier #: 456 BUNA Required: 06/22/11 Requested By: L. AINSWORTH (LAINSWOR)	10.00	EA	\$1.28	\$12.80	\$0.00	\$12.80	63305	5100
17	923973 LINK - OFFSET FOR NAT CHIP CONV DWG. E-1180-4, P/N RC-100-H, NOT-SU Supplier #: 100H OFFSET Required: 06/21/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$10.71	\$21.42	\$0.00	\$21.42	63305	4103
18	948825 BEARING - PILLOW BLOCK - 2" BORE, P/N SP-32 SEALMASTER OR 1209K RHP (NEED 2 AT A TIME) Supplier #: SP-32 Required: 06/26/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$233.74	\$467.48	\$0.00	\$467.48	63305	4103
19	920163 CLAMP - "O", 9/16" NOMINAL, P/N 1315 OETIKER Supplier #: 1315 Required: 06/24/11 Requested By: L. AINSWORTH (LAINSWOR)	20.00	EA	\$0.36	\$7.20	\$0.00	\$7.20	63305	5100
20	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 06/29/11 Requested By: L. AINSWORTH (LAINSWOR)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

SupplierShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B. DEST, FRT ALLOWED
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 15, NET 45

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Original Order No	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To				

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
21	832408 FILTER - AIR, THROWAWAY, 10" X 10" X 1" FIBERGLASS Supplier #: 10 X10 X1 Required: 06/30/11 Requested By: L. AINSWORTH (LAINSWOR)	12.00	EA	\$1.59	\$19.08	\$0.00	\$19.08	63305	5100
22	600401 SEALANT - SILICONE -LOCTITE, P/N 82046, 11 OUNCE ULTRA COPPER HIGH TEMP. RTV SILICONE GASKET SEALANT Supplier #: 82046 Required: 06/27/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$13.11	\$13.11	\$0.00	\$13.11	63305	5100
	920336 LUBRICANT - OPEN CHAIN, 12 PER CASE, P/N S00202 Supplier #: 00202 Required: 06/26/11 Requested By: L. AINSWORTH (LAINSWOR)	24.00	EA	\$3.70	\$88.80	\$0.00	\$88.80	63305	5100
24	500602 FILTER - ELEMENT HYCON P/N 0160D005BH3HC REXROTH P/N 6H10421 SERVO. FOR MARX HOOD. Supplier #: 0160D005BH4HC Required: 06/20/11 Requested By: L. AINSWORTH (LAINSWOR)	9.00	EA	\$98.57	\$887.13	\$0.00	\$887.13	63305	4103
25	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 06/20/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$16.60	\$33.20	\$0.00	\$33.20	63305	5100

Order Net	\$3,084.73
Order Tax	\$0.00
Order Total	\$3,084.73

Approved By DIANE LANGOLF (DLANGOLF)

7/1/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 8/25/2011

Contract #

Print Date 11/14/2011

SupplierShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B. DEST, FRT ALLOWED
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 15, NET 45

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Original Order Yes
Confirm To RON

Confirming Order No

Tax Exempt No
8/25/2011

Non-Exempt No

MSDS Required No

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	659056 BLADE - HACK SAW, POWER, 21 X 1 3/4, 6 TOOTH, P/N 61255 OR BS2106-8 Supplier #: 40127 Required: 09/08/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$18.82	\$18.82	\$0.00	\$18.82	63305	5100
2	606405 DEGREASER - NATURAL BLUE, LOCTITE, P/N 82251 - 1 GALLON Required: 08/26/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$16.60	\$33.20	\$0.00	\$33.20	63305	5100
3	923803 BEARING - INBOARD, GOULD PUMP 3196, SIZE 6 X 15, S/N 252B991, P/N 168A, PEERLESS #96XMK0015A OR SKF 6313-Z Supplier #: SKF 6313-Z Required: 08/25/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$127.17	\$127.17	\$0.00	\$127.17	63305	4103
4	832284 FILTER - HYDAC FILTER ELEMENT 0180MA003BN (3 MICRON). Supplier #: 0180MA003BN Required: 08/31/11 Requested By: L. AINSWORTH (LAINSWOR)	2.00	EA	\$78.34	\$156.68	\$0.00	\$156.68	63305	4101
5	923812 BEARING - OUTBOARD, FOR GOULD PUMP 3196, SIZE 6 X 15, S/N 252B991, P/N 112A, PEERLESS #96XMK0015A OR SKF 5313 Supplier #: SKF 5313 Required: 08/26/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$198.01	\$198.01	\$0.00	\$198.01	63305	4103
6	944205 VALVE - ITEM/POS 12 PRESSURE VALVE FOR MARX HOODS, P/N TYP- WUVPB-1MCO-10-1 24V+DC12. Supplier #: WUVPB-1MCO-10-1-24V P/N 400555394 Required: 10/15/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$259.63	\$259.63	\$0.00	\$259.63	63305	4103
	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500



Amendment

PO Date 8/25/2011

Contract #

Print Date 11/14/2011

Supplier

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Ship To

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B. DEST, FRT ALLOWED
Shipper

Bill To

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 15, NET 45

Original Order Yes
Confirm To RON

Confirming Order No

Tax Exempt No
8/25/2011

Non-Exempt No

MSDS Required No

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
	Required: 08/31/11								
	Requested By: L. AINSWORTH (LAINSWOR)								

Order Net \$1,252.51
Order Tax \$0.00
Order Total \$1,252.51

Approved By DIANE LANGOLF (DLANGOLF)

8/25/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"



Amendment

PO Date 9/26/2011

Contract #

Print Date 11/14/2011

SupplierShip ToBill To

MOTION INDUSTRIES, INC
P O BOX 1057
6576 DIPLOMAT DRIVE
STERLING HEIGHTS, MI 48311

MUELLER BRASS CO.
Receiving
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
F.O.B. DEST, FRT ALLOWED
Shipper

MUELLER BRASS CO.
Accounts Payable
2199 LAPEER AVE.
PORT HURON, MI 48060
USA
Terms 2% 15, NET 45

Phone Number (248) 583-8600

Fax Number (248) 583-8635

Original Order Yes	Confirming Order No	Tax Exempt No	Non-Exempt No	MSDS Required No
Confirm To RON M.		9/26/2011		

Line	Part/Description	Quantity	U/M	Unit Price	Line Net	Tax	Line Total	Acct	Cst Cntr
1	803672 BELT - "V", 3L350 DODGE, 1350 GATES, 3L350 BROWNING Supplier #: 3L350 Required: 09/28/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$2.85	\$2.85	\$0.00	\$2.85	63305	5100
2	920552 "O" RING - 1/8" X 4 5/8" X 4 7/8", 2 PER PKG, P/N 568-247 Required: 09/28/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$0.57	\$0.57	\$0.00	\$0.57	63305	5100
3	816667 CLAMP - HOSE, 1/2", STAINLESS STEEL, P/N HSS 8 DIXON OR 6808 IDEAL Supplier #: HSS8 Required: 09/25/11 Requested By: L. AINSWORTH (LAINSWOR)	30.00	EA	\$0.68	\$20.40	\$0.00	\$20.40	63305	5100
4	948601 ADHESIVE - BEARING MOUNT, 50 CC BOTTLE, LOCTITE Supplier #: 08531 Required: 09/28/11 Requested By: L. AINSWORTH (LAINSWOR)	1.00	EA	\$34.54	\$34.54	\$0.00	\$34.54	63305	5203
5	924199 FILTER - POLY, 3 MICRON, 30" LONG, SHELCO P/N SMB3-30 Supplier #: MB3-30 Required: 10/02/11 Requested By: L. AINSWORTH (LAINSWOR)	90.00	EA	\$5.10	\$459.00	\$0.00	\$459.00	63305	5500

Order Net	\$517.36
Order Tax	\$0.00
Order Total	\$517.36

Approved By DIANE LANGOLF (DLANGOLF)

9/26/2011

Terms and Conditions: THIS PURCHASE ORDER IS SUBJECT TO THE MUELLER INDUSTRIES TERMS AND CONDITIONS FOUND AT
<http://www.muellerindustries.com> UNDER "PRODUCTS AND SERVICES"

A DESCRIPTION OF THE ENVIRONMENTAL AND PUBLIC HEALTH BENEFITS

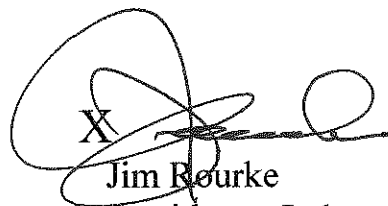
Implementation of the supplemental environmental project has enabled Mueller Brass Company to reduce its environmental impact in three manners. Installation of the reverse osmosis system has allowed for water to be reused at the facility that would otherwise have been sent to the POTW for treatment. This prevents the metals included in that water from being sent to the POTW. The reuse of the RO treated water enables Mueller Brass Co to purchase less water from the city. Both of these criteria reduce the burden placed upon the POTW to treat and supply Mueller Brass Co with those quantities of water.

For the time frame of September 28th 2010 to September 28th 2011 the best estimates as calculated by Mueller Brass Co calculates the RO system to have processed 6,837,000 gallons of water. This equates to 50.2 pounds of metal that would otherwise have been sent to the POTW being captured in the Mueller system. This calculation is based upon recent waste water discharge analysis.

Also beneficial to the environment is the recycling of the filter cake from the waste water treatment system. The filter cake is a composition of the flocculent used in the waste water treatment process and the metals that precipitate from the water. This cake that was previously sent to landfill is now being recycled for its zinc content.

From September 28th 2010 to September 28th 2011 Mueller Brass Co. shipped 123,025 pounds of filter cake to a zinc reclamation facility. Based upon recent analytical data this equates to 11,697 pounds of metals being recycled rather than landfilled.

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

X 

Jim Bourke
President – Industrial Products Division



October 5, 2010

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Quarterly Operation Report – 4th Quarter

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company, U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a quarterly operation report every ninety days after commencing operation of the reverse osmosis system. Construction was considered complete on 9/28/2009. This being the fourth quarterly report submitted summarizes the operation period between 7/01/2010 and 9/28/2010.

Pursuant to paragraph 85 item C the following is a listing of the requested information for the reporting period:

- The total metals discharged to the POTW were 62 pounds.
- The total metals shipped off site for recycling were 2620 pounds. Shipping documents are included in appendix A.
- The total water treated by the reverse osmosis system was 1,291,568 gallons.
- The total water treated by the reverse osmosis system and reused at the facility was 1,291,568 gallons.
- The total water discharged to the POTW was 8,401,206 gallons. This figure broken down monthly equates to the following: 2,782,503 gallons were discharged in July; 3,050,366 gallons were discharged in August; and 2,568,337 gallons were discharged in September.
- The total city water purchased, based upon the most recent city water bill, was 8,414,252 gallons.

If you have any questions regarding the above, please let us know.



Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Pedler", written in a cursive style.

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", is written over a large, stylized circular mark.

Jim Rourke
President – Industrial Products Division



APPENDIX A

ING MEMORANDUM - BILL OF LADING

MULLER BRASS CO.

2199 Lehigh Avenue
Port Huron, Michigan 48060

89964

OLD BRIDGE CHEMICALS
OLD WATERWORKS ROAD
OLD BRIDGE, N.J. 08857

DATE 7-6-10

PURCHASE ORDER NO. 99999

DEBIT MEMO NO. _____

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG N	
		DRIED WATER TREATMENT FILTER CAKE	
		METAL HYDROXIDES FOR RECYCLATION AT OLD BRIDGE CHEMICALS	
		SUPER SACK COLOR (W/ID) WITH A GREEN DOT	
			GROSS 2322 TARE 55.45 NET 2267

TONS _____

PAID TO _____

PREPAID ☐

COLLECT ☐

GROSS WEIGHT _____

AUTHORIZED AGENT SIGNATURE _____

DATE SHIPPED 7-6-10

OWNER'S SIGNATURE _____

RECEIVED BY _____

SIGNATURE _____

NO 1541 REV. 6/68

ORIGINATOR

SHIPPING MEMORANDUM - BILL OF LADING

89961



MUELLER BRASS CO.
2199 Lapeer Avenue
Port Huron, Michigan 48060

SHIPPED TO:

OLD BRIDGE CHEMICALS
OLD WATERWORKS ROAD
OLD BRIDGE N.J. 08857

DATE

7-28-10

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG 0	
		DRIED FILTER CAKE FROM	
		WATER TREATMENT	
		METAL HYDROXIDES FOR	
		RECLAMATION AT OLD BRIDGE	
		CHEMICALS	
		SUPER SACK COLOR CODED	
		WITH A GREEN DOT	
		GROSS	1882 LBS
		TARE	40 LBS 3RD
		NET	1482 LBS

CARTONS

PALLETS

PREPAID ☐COLLECT ☐

GROSS WEIGHT

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED

7-28-10

CARRIER & SIGNATURE

RECEIVED BY

SIGNATURE

MBCO 1541 REV. 6/96

PLANT SECURITY/PURCHASING



SHIPPING MEMORANDUM - BILL OF LADING

89958

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

SHIPPED TO:

OLD BRIDGE CHEMICALS

OLD WATERWORKS ROAD

OLD BRIDGE, N.J. 08857

DATE

8-10-10

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG P	
		DRIED FILTER CAKE FROM	
		WATER TREATMENT.	
		METAL HYDROXIDES FOR	
		RECLAMATION AT OLD BRIDGE	
		CHEMICALS	
		SUPERBAG COLOR CODED WITH	
		A GREEN DOT	
		GROSS	1706
		TARE	40
		NET	1666

CARTONS _____

PALLETS _____

PREPAID ☐COLLECT ☐

GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE _____

DATE SHIPPED

8-12-10

CARRIER & SIGNATURE _____

RECEIVED BY _____

SIGNATURE _____

MBCO 1541 REV. 6/91

PLANT SECURITY/PURCHASING

SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.

**2199 Lapeer Avenue
Port Huron, Michigan 48060**

89974

SHIPPED TO: *

SHIPPED TO:
OLD BRIDGE CHEMICALS
OLD WATERWORKS ROAD
OLD BRIDGE, N.J. 08857

DATE

8-16-10

PURCHASE ORDER NO.

999999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG Q	
		DRIED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR RECLAMATION AT OLD BRIDGE CHEMICALS.	
		SUPER SACK COLOR CODED WITH A GREEN DOT	
		GROSS TARE NET	2166 45 SKID 2126

ARTONS _____ PALLETS 1 PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED

9-17-10

ARRIER & SIGNATURE

RECEIVED BY

SIGNATURE

3CO 1541 REV. 6/96

PLANT SECURITY/PURCHASING



SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

89979

SHIPPED TO:

OLD BRIDGE CHEMICALS
OLD WATERWORKS ROAD
OLD BRIDGE, N.J. 08857

DATE 8-16-10

PURCHASE ORDER NO. 99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG R	
		DRIED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR RECLAMATION AT OLD BRIDGE CHEMICALS	
		SUPER SACK COLOR CONT'D WITH A GREEN DOT	
			GROSS 1694
			TARE 405K
			NET 1654

CARTONS

PALLET PREPAID ☐COLLECT ☐

GROSS WEIGHT

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED

8-17-10

CARRIER & SIGNATURE

RECEIVED BY

SIGNATURE

MBCO 1541 REV. 6/96

PLANT SECURITY/PURCHASING

SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.

**2199 Lapeer Avenue
Port Huron, Michigan 48060**

89980

SHIPPED TO: -

REPORT TO: *

OLD BRIDGE CHEMICALS

OLD WATERWORKS ROAD

OLD BRIDGE, NJ 08855

DATE _____

8-16-10

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG S	
		DRIED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR RECLAMATION AT OLD BRIDGE CHEMICALS	
		SUPER SACK COLOR CODED WITH A GREEN DOT	
		GROSS	1840
		TARE	40 SK
		NET	1800

CARTONS

~~PALLETS~~

PREPAID ☐COLLECT ☐

GROSS WEIGHT

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED

8-17-10

CARRIER & SIGNATURE

RECEIVED BY

SIGNATURE

MBCO 1541 REV. 8/96

PLANT SECURITY/PURCHASING

89981

**MUELLER BRASS CO.**2199 Lapeer Avenue
Port Huron, Michigan 48060

SHIPPED TO:

OLD BRIDGE CHEMICALS

OLD WATERWORKS ROAD

OLD BRIDGE, N.J. 08837

DATE

8-28-10

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG - T	
		DRIED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR REGULATION AT OLD BRIDGE CHEMICALS	
		SUPERBAG COLOR CONTAINER WITH A GREEN DOT	
		GROSS	1954
		TARE	40
		NET	1914

CARTONS _____

PALLETS _____

PREPAID ☐COLLECT ☐

GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE _____

DATE SHIPPED

8.31.10

CARRIER & SIGNATURE _____

RECEIVED BY _____

SIGNATURE _____

SHIPPING MEMORANDUM - BILL OF LADING

89982



MUELLER BRASS CO.

**2199 Lapeer Avenue
Port Huron, Michigan 48060**

SHIPPER TO:

SHIPPED TO:

- OLD BRIDGE CHEMICALS
- OLD WATERWORKS ROAD
- OLD BRIDGE, NJ 08857

DATE 8-28-10

PURCHASE ORDER NO. 99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG U	
		DRIED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR REMEDIATION AT OLD BRIDGE CHEMICALS	
		SUPPLACK COLOR CODED WITH A GREEN DOT	
		GROSS	1730
		TARE	40
		NET	1690

CARTONS

PALLETS

PREPAID

COLLECT

GROSS WEIGHT

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED

CARRIER & SIGNATURE

RECEIVED BY _____

SIGN/

MBCO 1541 REV. 6/96

PLANT SECURITY/PURCHASING

SHIPPING MEMORANDUM - BILL OF LADING

89983



MUELLER BRASS CO.

**2199 Lapeer Avenue
Port Huron, Michigan 48060**

SHIPPED TO:

SHIPPED TO: OLD BRIDLE CHEMICALS

OLD WATERWORKS ROAD

OLD BRIDGE, N.J. 08857

DATE _____

8-28-16

PURCHASE ORDER NO.

99990

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG V	
		DRIED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR RECLAMATION AT OLD BRIDGE CHEMICALS	
		SUPER SACK COLOR CODED WITH A GREEN DOT	
		GROSS	1278
		TARE	40
		NET	1234

CARTONS

PALLETS

PREPAID	
---------	--

COLLECT ☐

GROSS WEIGHT

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED

8-31-10

CARRIER & SIGNATURE

RECEIVED BY

SIGNATURE

MBCO 1541 REV. 6/96

PLANT SECURITY/PURCHASING

89984



**2199 Lapeer Avenue
Port Huron, Michigan 48060**

SHIPPED TO:

OLD BRIDGE CHEMICALS

OLD WATERWORKS LANE

OLD BRIDGE, N.J. 08857

DATE _____

8-28-10

PURCHASE ORDER NO.

999999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG W	
		DRIED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR RECLAMATION AT OLD BRIDGE CHEMICALS	
		SUPER SACK (COLOR CODED) WITH A GREEN DOT	
		GROSS	1986
		TARE	40
		NET	1946

CARTONS _____

PALLETS

PREPAID L

COLLECT L

GROSS WEIGHT

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED

8-31-20

CARRIER & SIGNATURE

RECEIVED BY

SIGNAT'

MBCO 1541 REV. 6/96

PLANT SECURITY/PURCHASING



SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

89985

SHIPPED TO:

OLD BRIDGE CHEMICALS
OLD WATERWORKS ROAD
OLD BRIDGE, N.J. 08857

DATE

9-24-10

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG X	
		DRIED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR RECLAMATION AT OLD BRIDGE CHEMICALS	
		SUPERSACK COLOR CODED WITH A GREEN DOT	
		GROSS	1160
		TARE	40
		NET	1120

CARTONS _____

PALLETS ☒PREPAID ☐COLLECT ☐

GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE _____

DATE SHIPPED

9-24-10

CARRIER & SIC

TARE _____

P

IVED BY _____

SIGNATURE

MBCO 1541 REV. 6/9.



SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

89993

SHIPPED TO:

OLD BRIDGE CHEMICALS

OLD WATERWORKS ROAD

OLD BRIDGE, N.J. 08857

DATE

9-24-10

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		3400 AA	
		DRYED FILTER CAKE FROM WATER TREATMENT	
		METAL HYDROXIDES FOR RELUAMATION AT OLD BRIDGE CHEMICALS.	
		SUPER SACK COLOR CODED WITH A GREEN DOT	
			GROSS 1782
			TARE 40
			NET 1742

CARTONS _____

PALLETS PREPAID ☐COLLECT ☐

GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE _____

DATE SHIPPED

9-24-10

CARRIER & SIGNATURE _____

RECEIVED BY _____

SIGNATURE _____

MBCO 1541 REV. 6/9

PLANT SECURITY/PURCHASING

PLANT SECURITY/PURCHASING

PLANT SECURITY/BIOLOGICAL

July 7, 2010



Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Quarterly Operation Report – 3rd Quarter

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company, U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a quarterly operation report every ninety days after commencing operation of the reverse osmosis system. Construction was considered complete on 9/28/2009. This being the third quarterly report submitted summarizes the operation period between 3/30/2010 and 6/30/2010.

Pursuant to paragraph 85 item C the following is a listing of the requested information for the reporting period:

- The total metals discharged to the POTW were 45 pounds.
- The total metals shipped off site for recycling were 763 pounds. Shipping documents are included in appendix A.
- The total water treated by the reverse osmosis system was 1,960,780 gallons.
- The total water treated by the reverse osmosis system and reused at the facility was 1,924,387 gallons.
- The total water discharged to the POTW was 5,345,399 gallons. This figure broken down monthly equates to the following: 817,458 gallons were discharged in April; 1,580,209 gallons were discharged in May; and 2,947,732 gallons were discharged in June.
- The total city water purchased, based upon the most recent city water bill, was 7,825,576 gallons.

If you have any questions regarding the above, please let us know.



Sincerely,

A handwritten signature in black ink that reads "Kevin Pedler".

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read 'Jim Rourke', is written over a large, stylized 'X' mark.

Jim Rourke
President – Industrial Products Division



APPENDIX A

RECEIVED
442-211000
JAN 10 1964
AIR MAIL

2120 1b G
2120 1b G

[Faint, mostly illegible text and a grid pattern, likely bleed-through from the reverse side of the page.]

PLANT SECURITY/PURCHASING

2002
60
1942

2002 lb G
- 60 SK11



SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

SHIPPED TO:

OLD BRIDGE CHEMICALS

OLD WITHELLOWS ROAD

OLD BRIDGE, N.J. ~~08857~~ 08857

DATE

PURCHASE ORDER NO.

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BIG L	(GROSS)
		DRIED WATER TREATMENT	1850 LBS
		PICER OKE	
		METAL HYDROXIDES FOR REG. TREATMENT	
		AT OLD BRIDGE CHEMICALS	
		SUPER SACK COLOR (CONF)	
		WITH A GREEN DOT	
			NET GROSS 1850
			- SKD 60
			NET 1790

CARTONS _____ PALLETS 1 PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____AUTHORIZED MSCO SIGNATURE [Signature] DATE SHIPPED 5-26-10

CARRIER & SIGNATURE _____ RECEIVED BY _____ SIGNATURE _____

MSCO 1841 REV. 8/88

ORIGINATOR

**2199 Lapeer Avenue
Port Huron, Michigan 48060**

1850 lb G
TRUE 60
NET 1790

36

1) $\frac{1}{2} \times 100 = 50$ (100% = 100)
 2) $\frac{1}{4} \times 100 = 25$ (100% = 100)
 3) $\frac{1}{8} \times 100 = 12.5$ (100% = 100)

QUANTITY	UNIT	DESCRIPTION	WGT
		316 L	
		DRIP IRON 1/2 IN	
		PIPE 1/2 IN	
		WATER HYDRANT 1/2 IN	
		AT END OF PIPE	
		3/4 IN. DIAL (WATER 1/2 IN)	
		WATER 1/2 IN	
			600 1850
			100 100
			1770

CARTONS _____ PALLETS _____ PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE _____ DATE SHIPPED _____

CARRIER & SIGNATURE _____ RECEIVED BY _____

MBCO 1541 REV. 6/96

ORIGINATOR



SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

89966

SHIPPED TO:

OLD BRIDGE CHEMICALS
OLD WATERWORKS ROAD
OLD BRIDGE, N.J. 08857

DATE 6-15-10

PURCHASE ORDER NO. 99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG M	
		DRIED WATER TREATMENT FILTER CAKE	
		METAL HYDROXIDES FOR RECLAMATION AT OLD BRIDGE CHEMICALS	
		SUPER SACK COLOR CODED WITH A GLEET DOT	
			SP
			GROSS 2276 LBS
			(SKID) TARE 45 LBS
			NET 2231 LBS

CARTONS _____ PALLETS  PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE _____ DATE SHIPPED 6-15-10

CARRIER & SIGNATURE _____ RECEIVED BY _____ SIGNATURE _____

MBCO 1541 REV. 6/96

PLANT SECURITY/PURCHASING

ART NO.

DATE ISSUED

6-15-10

GROSSED WEIGHT

TARE

NET WEIGHT

2276#

PIECES

REMARKS:

Filter cake

ISSUED BY:

NO. 71989

MBCO. 2669
REV. 1/85

FORWARDING TICKET
MUELLER BRASS CO.

WHITE - SCALE

CANARY - SHIPPER

PINK - VENDOR COPY

GOLD - RECEIVING



April 7, 2010

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Quarterly Operation Report – 2nd Quarter

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company, U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a quarterly operation report every ninety days after commencing operation of the reverse osmosis system. Construction was considered complete on 9/28/2009. This being the second quarterly report submitted summarizes the operation period between 12/29/09 and 3/29/2010.

Pursuant to paragraph 85 item C the following is a listing of the requested information for the reporting period:

- The total metals discharged to the POTW were 19 pounds.
- The total metals shipped off site for recycling were 502 pounds. Shipping documents are included in appendix A.
- The total water treated by the reverse osmosis system was 3,046,590 gallons.
- The total water treated by the reverse osmosis system and reused at the facility was 3,046,590 gallons.
- The total water discharged to the POTW was 3,408,374 gallons. This figure broken down monthly equates to the following: 1,225,846 gallons were discharged in January; 1,326,132 gallons were discharged in February; and 856,396 gallons were discharged in March.
- The total city water purchased, based upon the most recent city water bill, was 14,628,636 gallons.

It may be noted from the above figures that significantly more water was purchased than was discharged to the city of Port Huron or treated and reused by the reverse osmosis system. An underground water main break during the winter months has been considered



the major contributor to this unaccounted water. The break has since been fixed, and monitoring of the water meters has shown usage returning to expected levels.

If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in black ink that reads "Kevin Pedler".

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", with a large "X" written over the beginning of the signature.

Jim Rourke

President – Industrial Products Division



APPENDIX A



SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

89935

SHIPPED TO:

OLD BRIDGE CHEMICALS, INC
OLD WATERWORKS ROAD
OLD BRIDGE, N.J. 08857

DATE

1-21-2010

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY

UNIT

DESCRIPTION

WEIGHT

BAG G

DRIED WATER TREATMENT
FILTER CAKE:

138 L

60

NET

1326

METAL HYDROXIDES FOR
RECLAMATION AT:

OLD BRIDGE CHEMICALS

SUPERSACK IS COLOR CODED
WITH A GREEN DOT

CARTONS

PALLETS

PREPAID ☐COLLECT ☐

GROSS WEIGHT

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED

1-21-2010

CARRIER & SIGNATURE

RECEIVED BY

SIGNATURE

MBCO 1541 REV. 6/96

PLANT SECURITY/PURCHASING

PART NO.

DATE ISSUED

1-18-10

GROSSED WEIGHT

1386 #

TARE

60 #

NET WEIGHT

~~1386 #~~ 1326 #

PIECES

REMARKS:

Green Dot

ISSUED BY:

NO. 68107

MBCO 2669
REV. 1/95

FORWARDING TICKET
MUELLER BRASS CO.

WHITE - SCALE CANARY - SHIPPER PINK - VENDOR COPY GOLD - RECEIVING

PLANT SECURITY/PURCHASING

RT NO.

DATE ISSUED

GROSSED WEIGHT

18'22 #

TARE

60 #

NET WEIGHT

17 62 #

PIECES

REMARKS:

Green Dot

ISSUED BY:

NO. 68106

MBCO. 2669
REV 1/95

FORWARDING TICKET
MUELLER BRASS CO.

WHITE - SCALE CANARY - SHIPPER PINK - VENDOR COPY GOLD - RECEIVING

ART NO.

FLITER CASE

DATE ISSUED

3-25-10

GROSSED WEIGHT

2250

TARE

NET WEIGHT

PIECES

REMARKS:

ISSUED BY:

[Signature]

NO. 71534

MBCO. 2669
REV. 1/66

FORWARDING TICKET
MUELLER BRASS CO.

WHITE - SCALE

CANARY - SHIPPER

PINK - VENDOR COPY

GOLD - RECEIVING

BRASS ROD

January 11, 2010

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Quarterly Operation Report – 1st Quarter

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a quarterly operation report every ninety days after commencing operation of the reverse osmosis system. Construction was considered complete on 9/28/2009. Consequently this report summarizes the operation period between 9/28/09 and 12/28/09.

Pursuant to paragraph 85 item C the following is a listing of the requested information for the reporting period:

- The total metals discharged to the POTW were 119 pounds.
- The total metals shipped off site for recycling were 1070 pounds. Shipping documents are included in appendix A
- The total water treated by the reverse osmosis system was 1,846,338 gallons.
- The total water treated by the reverse osmosis system and reused at the facility was 1,301,210 gallons.
- The total water discharged to the POTW was 12,343,220 gallons. Broken down to a monthly basis: 4,316,970 gallons were discharged in October; 4,112,370 gallons were discharged in November; and 3,913,880 gallons were discharged in December.
- The total city water purchased, based upon the most recent city water bill, was 9,065,760 gallons.

All of this information can be verified with supporting documentation upon request.

It may be noted from the above figures that significantly more water was purchased and discharged to the POTW than was treated by the reverse osmosis system. This has been the result of several unforeseen issues arising during what can be considered the

BRASS ROD



"debugging" phase of the system. These issues have resulted in the system being inoperable for considerable lengths of time. Below is a listing of problems encountered in the 1st quarter of operation:

- Excessive biocide fouling of the reverse osmosis pre-filters caused pre-mature failure of the cartridges. To remedy the issue a new biocide was added.
- Mechanical failure of the plastic chemical feed lines required one week of downtime to the system in order to reroute the piping and install more robust fittings.
- Chemical feed points were required to be relocated for better pH control of the inlet water. This relocation of the feed points required the addition of electronic monitoring equipment. This resulted in 2 weeks of downtime.
- A fine particulate matter is causing rapid fouling of the pre-filtration system. This has caused downtime on two of the three shifts due to the rapid blinding of the cartridges. The solution is currently being investigated.

May it be stated here that when the system is in operation the stipulations set forth in the CAFO are being upheld concerning the metals removal efficiency, and since the inception of operations all sludges have been sent off site for recycle rather than landfill. The debugging process can be considered typical when concerning a project of this magnitude and Mueller Brass Company is attempting to expedite this process as much as possible.

If you have any questions regarding the above, please let us know.

Sincerely,

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", with a large "X" mark to the left of the signature.

Jim Rourke
President – Industrial Products Division



Appendix A

Filter Cake Recycling Summary

2009

Date of Shipment to Old Bridge	ID #	Net Wt. Shipped (lbs)
10/20/2009	A	1,689
10/20/2009	B	1,947
11/18/2009	C	2,006
11/18/2009	D	1,664
12/21/2009	E	1,817
12/21/2009	F	1,963
2009 Total		11,086

SHIPPING MEMORANDUM - BILL OF LADING

PART NO.

Dust

DATE ISSUED

10-19-09

GROSSED WEIGHT

TARE

NET WEIGHT

#

1724

33

(SKID)

1689

PIECES

REMARKS:

Dust From Waste water

ISSUED BY:

210

Bo Ravin

NO.

68967

MBCO. 2669
REV. 1/85

FORWARDING TICKET
MUELLER BRASS CO.

WHITE - SCALE

CANARY - SHIPPER

PINK - VENDOR COPY

GOLD - RECEIVING

MUELLER BRASS COMPANY

EMERGENCY PHONE NUMBER: 810-987-7770

MATERIAL DESCRIPTION:

Metal Hydroxides

NAERG96

Substances (Low to Moderate Hazard)

GUIDE

171

EMERGENCY RESPONSE

FIRE

Small Fires

- Dry chemical CO2, water spray or regular foam.

Large Fires

- Water spray fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Do not scatter spilled material with high pressure water streams.
- Dike fire-control water for later disposal.

Fire Involving Tanks

- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from ends of tanks.

SPILL OR LEAK

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent dust cloud.
- Avoid inhalation of asbestos dust.

Small Dry Spills

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

Small Spills

- Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

Large Spills

- Dike far ahead of liquid spill for later disposal.
- Cover powder spill with plastic sheet or tarp to minimize spreading.
- Prevent entry into waterways, sewers, basements or confined areas.

FIRST AID

- Move victim to fresh air. -Call emergency medical care.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material (s) involved, and take precautions to protect themselves.

SHIPPING MEMORANDUM - BILL OF LADING

95625

MUELLER BRASS CO.

**2199 Lapeer Avenue
Port Huron, Michigan 48060**

SHIPPED TO:

OLD BRIDGE CHEMICALS
OLD WATERWORKS ROAD
OLD BRIDGE, N.J. 08857

DATE 10-20-09

PURCHASE ORDER NO.

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG B 1982 LAB-SKID	
			33 LBS
		DRIED WATER TREATMENT FILTER CAKE:	1947 LBS NET
		METAL HYDROXIDES FOR RECLAMATION AT:	
		AND BRIDGE CHEMICALS	
		SUPER SACK COLOR CODED WITH A GREEN DOT	

CARTONS _____ PALLETS 1 PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE [Signature] DATE SHIPPED 10-20-07

CARRIER & SIGNATURE _____ RECEIVED BY _____

FO 1541 REV. 6/88

SIGNATURE

PLANT SECURITY/PURCHASING

PART NO. *Dust*

DATE ISSUED *10-19-09*

GROSSED WEIGHT

TARE

NET WEIGHT

#
1982

PIECES

REMARKS:

Dust From Waste Water Dept

(B)

ISSUED BY:

2nd

Re Haven

NO. 68966

FORWARDING TICKET
MUELLER BRASS CO.

CANARY - SHIPPER PINK - VENDOR COPY GOLD - RECEIPT 3

-35 LBS SKID

MUELLER BRASS COMPANY

EMERGENCY PHONE NUMBER: 810-987-7770

MATERIAL DESCRIPTION: Metal Hydroxides

NAERG96

Substances (Low to Moderate Hazard)

GUIDE

171

EMERGENCY RESPONSE

FIRE

Small Fires

- Dry chemical CO2, water spray or regular foam.

Large Fires

- Water spray fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Do not scatter spilled material with high pressure water streams.
- Dike fire-control water for later disposal.

Fire Involving Tanks

- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from ends of tanks.

SPILL OR LEAK

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent dust cloud.
- Avoid inhalation of asbestos dust.

Small Dry Spills

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

Small Spills

- Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

Large Spills

- Dike far ahead of liquid spill for later disposal.
- Cover powder spill with plastic sheet or tarp to minimize spreading.
- Prevent entry into waterways, sewers, basements or confined areas.

FIRST AID

- Move victim to fresh air. -Call emergency medical care.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material (s) involved, and take precautions to protect themselves.



SHIPPING MEMORANDUM - BILL OF LADING

95630

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

SHIPPED TO:

OLD BRIDGE CHEMICALS
OLD WATERWORKS ROAD
OLD BRIDGE, N.J. 08857

DATE

11/18/09

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG C	
		DRIED WATER TREATMENT FILTER CAKE:	-SKID (W/L)
		METAL HYDROXIDES FOR RECLAMATION AT: OLD BRIDGE CHEMICALS	2006 NET WT.
		SUPER SACK COLOR CODED WITH A GREEN DOT	

CARTONS _____ PALLETS ~~0~~ PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____AUTHORIZED MBCO SIGNATURE  DATE SHIPPED 11/18/09

CARRIER & SIGNATURE _____ RECEIVED BY _____ SIGNATURE _____

JO 1541 REV. 6/96

PLANT SECURITY/PURCHASING

MUELLER BRASS COMPANY

EMERGENCY PHONE NUMBER: 810-987-7770

MATERIAL DESCRIPTION: Metal Hydroxides

NAERG96

Substances (Low to Moderate Hazard)

GUIDE

171

EMERGENCY RESPONSE

FIRE

Small Fires

- Dry chemical CO2, water spray or regular foam.

Large Fires

- Water spray fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Do not scatter spilled material with high pressure water streams.
- Dike fire-control water for later disposal.

Fire Involving Tanks

- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from ends of tanks.

SPILL OR LEAK

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent dust cloud.
- Avoid inhalation of asbestos dust.

Small Dry Spills

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

Small Spills

- Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

Large Spills

- Dike far ahead of liquid spill for later disposal.
- Cover powder spill with plastic sheet or tarp to minimize spreading.
- Prevent entry into waterways, sewers, basements or confined areas.

FIRST AID

- Move victim to fresh air. -Call emergency medical care.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material (s) involved, and take precautions to protect themselves.



SHIPPING MEMORANDUM - BILL OF LADING

95631

MUELLER BRASS CO.2199 Lapeer Avenue
Port Huron, Michigan 48060

SHIPPED TO:

OLD BRIDGE CHEMICALS

OLD ~~BRIDGE~~ WATERWORKS ROAD

OLD BRIDGE N.J. 08857

DATE

11-18-09

PURCHASE ORDER NO.

99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BAG D	
		DRIED WATER TREATMENT FILTER CAKE.	NET 1664
		METAL HYDROXIDES FOR RECLAMATION AT: OLD BRIDGE CHEMICALS	WT
		SUPER SACK COLOR CODED WITH A GREEN DOT	

CARTONS _____ PALLETS  PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE

DATE SHIPPED 11-18-09

CARRIER & SIGNATURE

RECEIVED BY

SIGNATURE

MBCO 1541 REV. 6/96

PLANT SECURITY/PURCHASING

MUELLER BRASS COMPANY

EMERGENCY PHONE NUMBER: 810-987-7770

MATERIAL DESCRIPTION: Metal Hydroxides

NAERG96

Substances (Low to Moderate Hazard)

GUIDE

171

EMERGENCY RESPONSE

FIRE

Small Fires

- Dry chemical CO2, water spray or regular foam.

Large Fires

- Water spray fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Do not scatter spilled material with high pressure water streams.
- Dike fire-control water for later disposal.

Fire Involving Tanks

- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from ends of tanks.

SPILL OR LEAK

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent dust cloud.
- Avoid inhalation of asbestos dust.

Small Dry Spills

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

Small Spills

- Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

Large Spills

- Dike far ahead of liquid spill for later disposal.
- Cover powder spill with plastic sheet or tarp to minimize spreading.
- Prevent entry into waterways, sewers, basements or confined areas.

FIRST AID

- Move victim to fresh air. -Call emergency medical care.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material (s) involved, and take precautions to protect themselves.

SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.

**2199 Lapeer Avenue
Port Huron, Michigan 48060**

89928

SHIPPED TO:

OLD BRIDGE QUESTIONS

and other small fish

OLD BRIDGE N.I. 08/57

DATE _____

42107

PURCHASE ORDER NO.

100

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		OIL F	
		DRIED WATER TREATING PI PISTON OIL	1872 25500
		METRIC HANDS FOR KITCHEN USE	181 NET
		GOD BRIDGE CHEESE	
		SUPER SAKA LOVE (GOLD)	
		WHITE H. GLEET ITI	

CARTONS _____ PALLETS 1 PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE _____ DATE SHIPPED _____

CARRIER & SIGNATURE

MBCO 1541 REV. 6/86

RECEIVED BY _____

SIGNATURE

ORIGINATOR

MUELLER BRASS COMPANY

EMERGENCY PHONE NUMBER: 810-987-7770

MATERIAL DESCRIPTION: Metal Hydroxides

NAERG96

Substances (Low to Moderate Hazard)

GUIDE

171

EMERGENCY RESPONSE

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- Ensure that medical personnel are aware of the material (s) involved, and take precautions to protect themselves.

SHIPPING MEMORANDUM - BILL OF LADING

MUELLER BRASS CO.

2199 Lapeer Avenue
Port Huron, Michigan 48060

89929



SHIPPED TO:

OLD BRIDGE CHEMICALS, INC.
OLD WATER WORKS ROAD
OLD BRIDGE, N.J. 08857

DATE 12-21-09

PURCHASE ORDER NO. 99999

DEBIT MEMO NO.

QUANTITY	UNIT	DESCRIPTION	WEIGHT
		BKG F	
		DRYED WATER TREATMENT	GROSS 2018 LBS
		WATER CAKE	-55 SKID
		METAL IMPROVEMENTS FOR	1903
		RECOMMENDATION AT	NET
		OLD BRIDGE CHEMICALS	
		SUPPL-SKE COLOR (ODFA)	
		WITH A GLEET DYE	

CARTONS _____ PALLETS ☒ PREPAID ☐ COLLECT ☐ GROSS WEIGHT _____

AUTHORIZED MBCO SIGNATURE _____ DATE SHIPPED 12-21-09

CARRIER & SIGNATURE _____ RECEIVED BY _____

MBCO 1541 REV. 6/98

SIGNATURE

ORIGINATOR

MUELLER BRASS COMPANY

EMERGENCY PHONE NUMBER: 810-987-7770

MATERIAL DESCRIPTION: Metal Hydroxides

NAERG96

Substances (Low to Moderate Hazard)

GUIDE

171

EMERGENCY RESPONSE

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- Ensure that medical personnel are aware of the material (s) involved, and take precautions to protect themselves.

BRASS ROD



October 2, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for September 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th, 2008.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of September 2009.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Installed additional chemical monitoring equipment
- Completed installation of filter cake dry bulk conveyor and bag system
- Performed 24 hour trial runs
- Completed construction phase of project on September 28. Pursuant the CAFO a Construction Completion Report will be submitted within 60 days of the above date.

This update only pertains to work conducted between the 1st of September and the 30th of September.

If you have any questions regarding the above, please let us know.

BRASS ROD



Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Pedler", is written over the typed name.

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", is written over a large, stylized "X" mark.

Jim Rourke
President – Industrial Products Division

BRASS ROD

September 8, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for August 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th, 2008.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of August 2009.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Completed trials of the system for wastewater treatment of the RO reject water
- Installed biocide pump on RO feed water tank
- Calibrated RO water flow meters
- Proposal accepted for recycling of filter cake by hazardous secondary material recycler
- Permit to Install of the new filter cake drying operation was finalized and approved by the MIDEQ
- Filter cake drying equipment was received and installation began

BRASS ROD



This update only pertains to work conducted between the 1st of August and the 31st of August.

If you have any questions regarding the above, please let us know.

Sincerely,

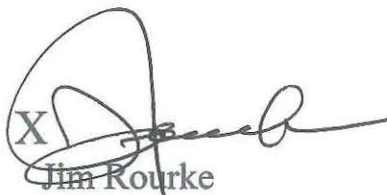
A handwritten signature in black ink that reads "Kevin Pedler". The signature is written in a cursive, flowing style.

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

X 

Jim Rourke
President – Industrial Products Division

BRASS ROD



August 6, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for July 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th, 2008.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of July 2009.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Completed the assembly of a new PH monitoring system for the RO reject WWT Circuit
- Permit to install application was submitted to modify the air permit to correspond with the modifications to be made to the filter cake dryer
- Ordered components for the rework of filter cake drying procedure
 - Conveyor on order – Due in August 30th
 - Completed the construction of a Supersack frame

Problems encountered this month are as follows:

- 1) In response to biological growth in the pre-filters of the RO unit a biocide pump was ordered.

BRASS ROD



This update only pertains to work conducted between the 1st of July and the 31st of July.

If you have any questions regarding the above, please let us know.

Sincerely,

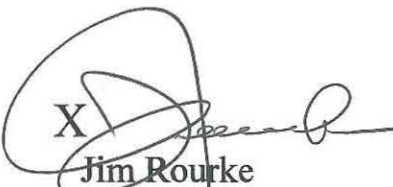
A handwritten signature in black ink, appearing to read 'Kevin Pedler', is written over a light blue horizontal line.

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.

BRASS ROD

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

X 

Jim Rourke

President – Industrial Products Division

BRASS ROD

July 1, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for June 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th, 2008.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of June 2009.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Completed all of the remaining water feed lines from the RO unit to plant usages
- Ran wiring for the isolation of the second clarifier pump in WWT so that it may be used to treat the RO reject water
- Began the assembly of a new PH monitoring system for the RO reject WWT circuit
- Ordered components for the rework of filter cake drying procedure
 - Conveyor on order
 - Supersack frame under construction

Problems encountered this month are as follows:

- 1) We began to notice biological growth in the pre-filters of the RO unit
- 2) The primary PH adjust tank needed to be shut down and cleaned for proper water flow to secondary treatment system
- 3) The entity recycling our filter cake stopped accepting said secondary material due to low metal content. The low metal content is due to a high moisture content stipulated in our air permit. We are currently requesting a modification to our air

BRASS ROD



permit so that we may further dry our filter cake, thereby increasing the metal content. This change in process will require an alteration in the filter cake dryer system to prevent a dusting hazard. Installation of new equipment will begin once the permit to install is approved by the MIDEQ.

This update only pertains to work conducted between the 1st of June and the 30th of June.

If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in black ink that reads "Kevin Pedler".

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.

BRASS ROD

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Bourke", is written over a blue ink stamp of the same name.

Jim Bourke
President – Industrial Products Division

BRASS ROD

June 1, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

RECEIVED
DIVISION FRONT OFFICE
JUN 08 2009
AND AND CHEMICALS DIVISION
U.S. EPA - REGION 5

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for May 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th, 2008.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of May 2009.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Redesigned waste water flow through the treatment plant to accommodate RO reject water
- Continued RO water piping to the furthest point in Rod Mill
- Corrected pre-filter and backwash issues
- Installed hyper-accurate level sensor for RO feed tank
- Issues with the high conductivity of RO reject water have delayed the 24 hour operation of the system by 3-4 weeks. The system redesign is complete and changes are being implemented to resolve the issue.

This update only pertains to work conducted between the 1st of May and the 31st of May.

BRASS ROD



If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Pedler".

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", with a large, stylized loop at the beginning.

Jim Rourke
President – Industrial Products Division

BRASS ROD



RECEIVED
DIVISION FRONT OFFICE

MAY 03 2009

LAND AND CHEMICALS DIVISION
U.S. EPA - REGION 5

May 4, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for March 2009
Explanation of tardiness

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th, 2008.

In accordance with the above, Mueller Brass Co. did file a monthly progress report on the construction of the SEP during the period of March 2009 on the date of April 10th, 2009. However, this report never was received by you. It appears the United States Postal Service found the addressee to be unknown. Evidence of this is provided in the attachments. I have also included a copy of the certified mail receipt as proof of mailing date. The final enclosure is a copy of the construction progress report which never was received by you.

I hope the enclosed is sufficient evidence that this report is overdue at no fault of Mueller Brass Company.

Thank you for your patience and understanding.

Sincerely,

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

BRASS ROD



April 3, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for March 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th, 2008.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of March 2009.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Completed piping to the #4 caster
- Completed the chemical feed loop to the reverse osmosis unit
- Installed a water meter for the measurement of discharge to the city sewer system
- Completed programming of reverse osmosis unit
- Installed monitoring equipment for plant feed water
- Unexpected alterations to the piping to accommodate the city water meter has delayed the project approximately one week
- Programming changes to the reverse osmosis unit for additional water monitoring has delayed the project another week

This update only pertains to work conducted between the 1st of March and the 31st of March.

BRASS ROD



If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in cursive script that reads 'Kevin Pedler'.

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read 'Jim Bourke', is written over a circular stamp. The stamp contains the letter 'X' in the upper left corner. The signature is fluid and extends to the right.

Jim Bourke
President – Industrial Products Division

7006 0500 0002 2095 2871

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Return Receipt Fee (Endorsement Required)	\$2.20	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
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City, State, ZIP+4 <u>Chicago, IL 60604</u>		
PS Form 3800, August 2006 See Reverse for Instructions		

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Associated Label/Receipt:

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- Addressee Unknown, April 16, 2009, 9:23 am, CHICAGO, IL
- Acceptance, April 10, 2009, 12:05 pm, PORT HURON, MI 48060

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BRASS ROD

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

May 4, 2009

RECEIVED
REPORT OFFICE

08 2009

CHEMICALS DIVISION
REGION 5

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for April 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th, 2008.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of April 2009.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Installation of PLC control wiring from the basement of # 3 Caster to the reverse osmosis unit
- Completed piping to #5 Extruder cooling tower make up water
- Completed plumbing to #5 Extruder coil rinse tanks
- Investigated backwash procedures and possible debris in the feed lines
- Installation of analog pressure sensors on Multi-media filters
- Reverse Osmosis unit begins 24 hour operation trial runs

This update only pertains to work conducted between the 1st of April and the 30th of April.

BRASS ROD



If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Pedler".

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.

BRASS ROD

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", is written over a large, stylized "X" mark.

Jim Rourke
President – Industrial Products Division

BRASS ROD

March 3, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for February 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of February 2009.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Piping from the R/O reject water to the WWT tanks has been installed.
- Conduit from the pump packages has been installed and wired.
- Piping to and from the multi-media pre-filters has been completed.
- Piping of the drain lines to the drain basin has been completed.
- Wiring of the R/O unit to the power plant and monitoring systems has been completed.
- We are running approximately two weeks behind our original schedule due to unanticipated piping problems.

This update only pertains to work conducted between the 1st of February and the 28th of February.

BRASS ROD



If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Pedler".

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.

BRASS ROD

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A handwritten signature in black ink, appearing to read "Jim Rourke", with a large "X" written over the beginning of the signature.

Jim Rourke
President – Industrial Products Division

February 4, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for January 2009

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of January 2009.

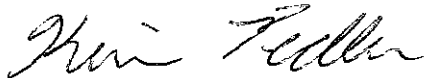
Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- The platform to hold the reverse osmosis unit, multi-media filters, and clean tank was erected.
- The reverse osmosis unit, multi-media filters, and clean tank have been installed in their final locations.
- All process pumps have been received and installed.
- Began piping and electrical installation in the wastewater treatment plant.
- As of this point in time there have been no significant disruptions to progress.

This update only pertains to work conducted between the 1st of January and the 31st of January.

If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Pedler". The script is cursive and fluid.

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read 'Jim Rourke', with a large, stylized loop at the beginning.

~~Jim Rourke~~

President – Industrial Products Division

BRASS ROD



January 6, 2009

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for December 2008

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of December 2008.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- Began piping installation in the main plant. This piping will return the post-treatment water back to the production process.
- The platform to hold the fluid cooler was erected, and the fluid cooler was installed.
- All additional electrical components necessary for the project have been ordered.
- As of this point in time there have been no significant disruptions to progress.

This update only pertains to work conducted between the 1st of December and the 31st of December.

BRASS ROD



If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in black ink that reads "Kevin Pedler".

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.

BRASS ROD

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read 'Jim Rourke', is written over a large, stylized 'X' mark.

Jim Rourke
President – Industrial Products Division

BRASS ROD

December 8, 2008

Michael Beedle
RCRA Branch, LR-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Supplemental Environmental Project (SEP)
Construction Progress Report for November 2008

Dear Mr. Beedle:

As required under paragraph 85 of the Consent Agreement and Final Order (CAFO) with Mueller Brass Company U.S. EPA ID NO. MID005357504, Mueller Brass Co. is required to file a construction report by the 15th of each month following the effective date of the CAFO. The effective date of the CAFO was September 30th.

In accordance with the above, Mueller Brass Co. is filing this monthly progress report on the construction of the SEP during the period of November 2008.

Pursuant to paragraph 85 item A the following is a listing of the significant accomplishments and difficulties during the reporting period:

- All equipment and material orders have been placed with the corresponding suppliers.
- All necessary waste water treatment plant storage tanks have been cleaned.
- All cement work has been completed.
- All water piping and electrical conduit has been trenched from the main plant to the waste water treatment plant area.
- As of this point in time there have been no significant disruptions to progress.

This update only pertains to work conducted between the 1st of November through the 30th of November.

BRASS ROD



If you have any questions regarding the above, please let us know.

Sincerely,

A handwritten signature in cursive script that reads "Kevin Pedler".

Kevin Pedler
EHS Coordinator
Mueller Brass Company
810-434-2713

Cc: J. Rourke, J. Davidson, R. Kartanys: Mueller Brass Co.



I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

A handwritten signature in black ink, appearing to read "Jim Rourke", with a large "X" mark over the first part of the signature.

Jim Rourke
President – Industrial Products Division